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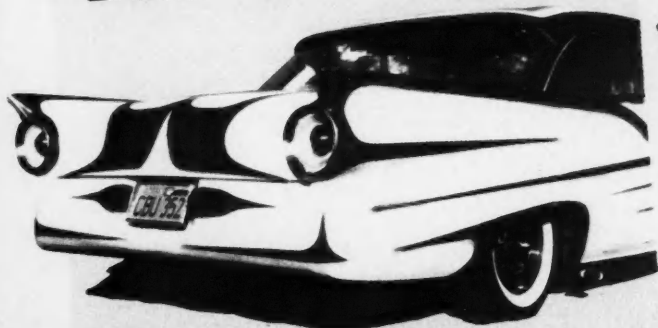
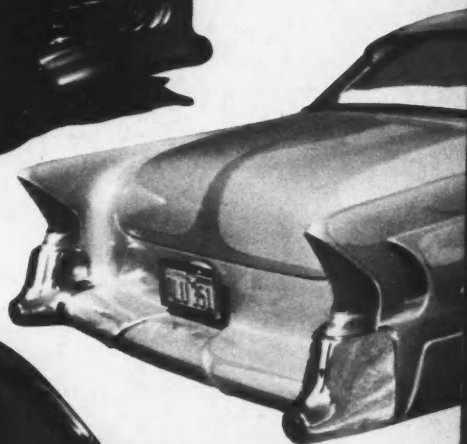
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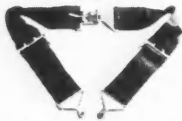


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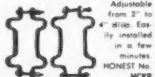
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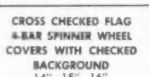
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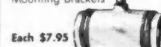
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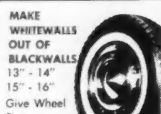
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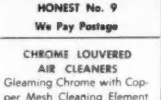
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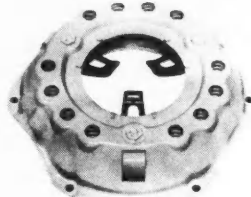
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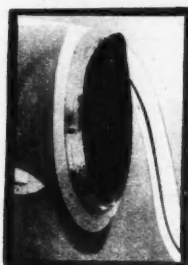
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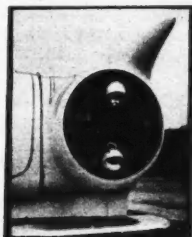
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— Anscochromes by Barris, Starbird, Paloczy.



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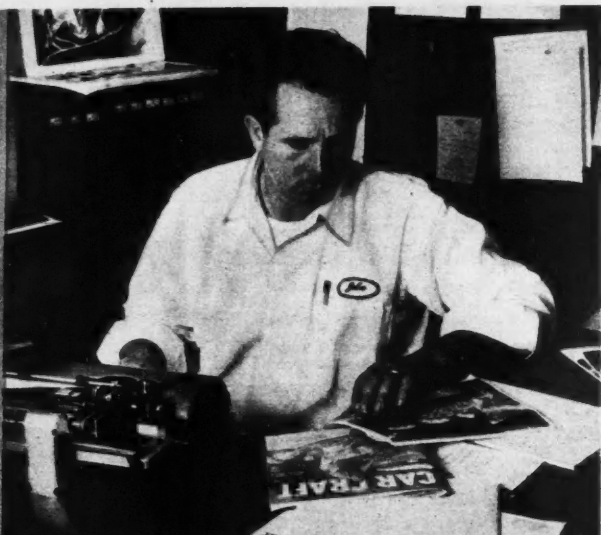
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SPEAKING

of

the editor



A new member of CAR CRAFT's technical staff sneaked onto the masthead last month without benefit of formal introduction—I would like to rectify that situation now. The man's name is John Geraghty. When not pounding a typewriter for a tech feature as seen above you can usually find the guy putting the finishing touches to some specialized engine work, making final adjustments on a wild engine swap, or calibrating dyno readings as he wrings out some drag stocker for hidden horsepower. John is proprietor of the Geraghty Automotive Service garage located in Los Angeles. Inside his well equipped establishment can be found teeming activity of hot rodding at its best. But you must go back a few years to really qualify John's technical knowledge. It all started on the popular California dry lakes, with roadsters and competition coupes. From here interest followed the hot rodding trail to Bonneville and current weekly drag racing. Sports car competition and drag boating are a couple of more recent Geraghty exploits. And last but not least, is one of the most beautiful competition "T" bucket roadsters ever assembled, which John shares in partnership with fellow enthusiast John Crawford. This is just a brief backdrop of Geraghty's practical experience—but you can get better acquainted with the man's technical ability by reading his first CAR CRAFT offering "Super-Tuning Your Impala" page 14. You'll be reading more John Geraghty articles in the future.

custom car enthusiasts in Detroit, Michigan. The National Hot Rod Association will not only host the country's fastest competition cars for their fifth annual National Drag Races—but will also throw the spotlight on the nation's most beautiful show-cars as the doors of Detroit's modern Armory swing open for the first annual National Custom Car Show. While dragsters are dueling it out on the city's newly constructed drag raceway for national competition titles—top show-cars will be undergoing careful scrutinizing by judging Detroit stylists in their own competitive field for national awards. I needn't expound on the competition that will highlight this huge combination of events—the drags will be the "Biggest Go" yet, and the meeting of East and West show-cars on the showroom floor for the first real comparison of originality, workmanship, and customized appeal is unprecedented. What else can I say except—see you in Detroit!

A feature that has been long overdue is one concerning national engine specifications for the increasingly popular sport of quarter midget racing. Next month's issue of CAR CRAFT will introduce part one of a four part monthly engine series dealing with this particular unorganized subject. Not only will engine specifications be presented for each racing division—but each article will carry full step-by-step photographically illustrated instructions of each modification allowed pertaining to each division's powerplant and how you can go about incorporating them into your own car's engine. A must for every quarter midget enthusiast—don't miss it!

—Dick Day
CAR CRAFT

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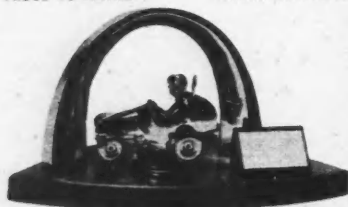
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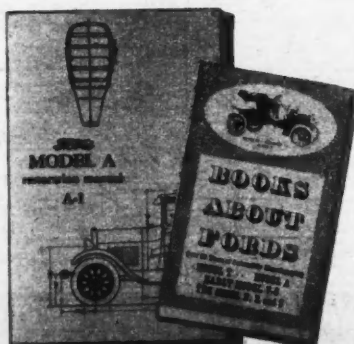


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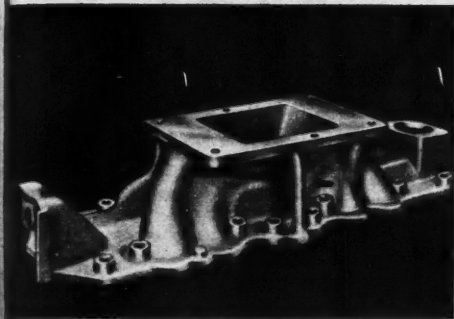
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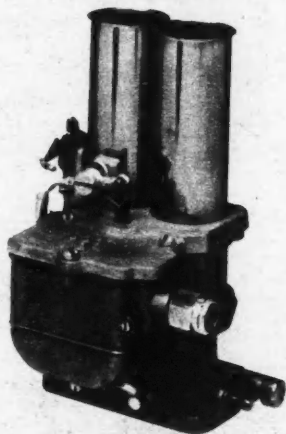


CAR CRAFT



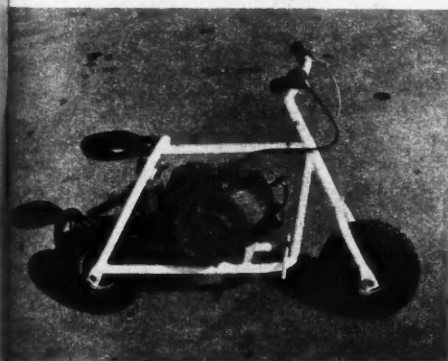
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New supercharger manifold for flat-head Fords, Mercs. Accommodates 3-71 or 4-71 GMC blowers. Price: \$60.00. Available only from: Navarro Racing Equipment 5142-cc San Fernando Road, Glendale 4, Calif.



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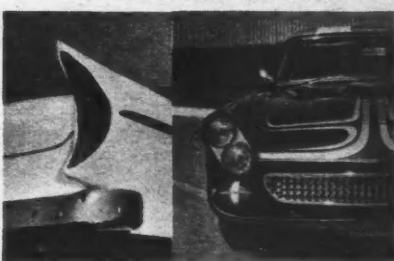
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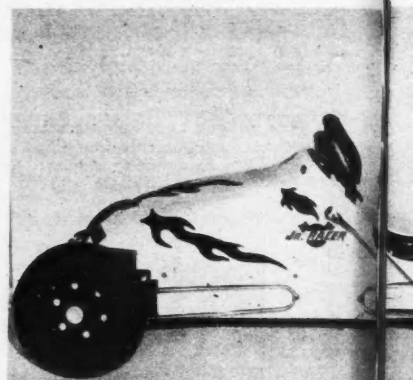
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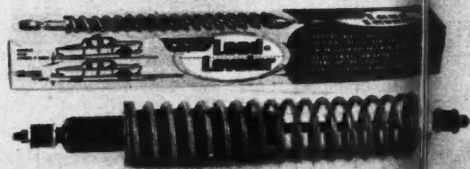
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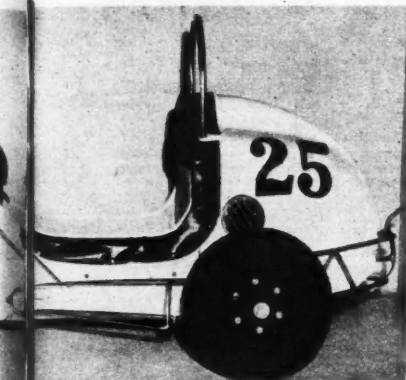
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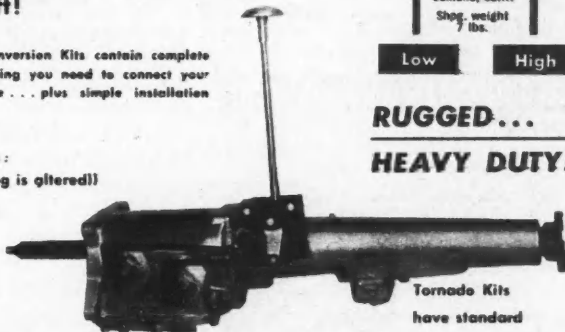
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LETTERS

DRAWINGS ARE BETTER THAN EVER!

Dear Sir:

In this day of disgusting conformity, where the only way to tell one "Custom" apart from another is to look at its hubcaps; and "the roadster" has been squeezed off the road. In this gloom, it is refreshing to look at my drawings (at least that is what I keep telling myself). The sketches in the attached package illustrate the type of machine one has come to expect from hot-rodders. However, cars of this type have fled hence into yon woodwork and are only rarely to be found. To remedy this, I suggest that your magazine publish my sketches, to encourage the construction of the individualistic custom or rod. If you are unable to use them, I forgive you, and we shall regretfully chalk up another victory for mob psychology. In that sad event I merely ask that they be returned in the stamped, self-addressed envelope.

—Coburn Freer
Portland, Oregon

Have a heart, Coburn, we have just begun to fight. Our minds have not been brainwashed by mob psychology.

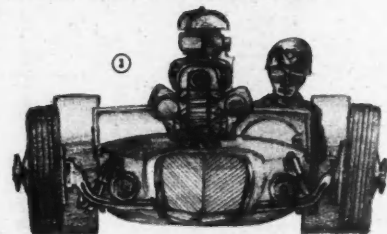
However, be there any individuals with strong constitutions and backs present, attention: We at Car Craft guarantee you complete coverage if you muster forces to build any of the above automobiles from the fine penmanship of Mr. Freer. Go to it!—Ed.



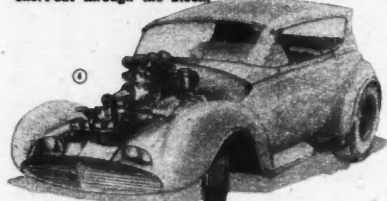
1. A modernized '27 T with a fiberglass body. Note low seating position.



2. As cutouts get more exotic by the day, I suggest this system as the ultimate for the street roadster. An added advantage is 100% back pressure.



3. At last, a respectable channel job! Blown over-head-cam model B successfully blocks all vision. Driver can visually inspect each rod as it takes a short-cut through the block.



4. This was a 1938 Plymouth that I used to own. Note glorified engine treatment, impossibility of fitting a hood.

NOVA SCOTIA NOVELTY

Dear Sir:

I have a '50 Merc which is customized very slightly. I have rounded the corners of the hood and molded



in the grille shell. The headlights are frenched with '53 Merc headlight rims. The splash pans and rocker panels are also frenched in. Trunk and hood have been shaved and an electric trunk latch has been adapted. The taillights are from a '58 Ford which have been frenched in. The side trim has been removed and the holes filled to give it a sleek look. I have a '58 Meteor grille installed

upside down which fits very nicely.

With this letter, I have enclosed a few snapshots. I would be very pleased if these pictures could be placed in your magazine for there are very few customized cars in this province.

—Don J. Ramsay
Sydney, N.S., Canada

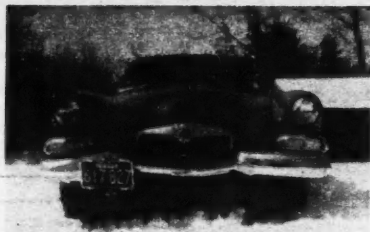
Not only does that Meteor grille look great in your Merc, but the stock Meteor wagon next to your custom illustrates a neat change-over for '58 Ford lovers. Good show!—Ed.

SPORTY STUDE

Dear Sir:

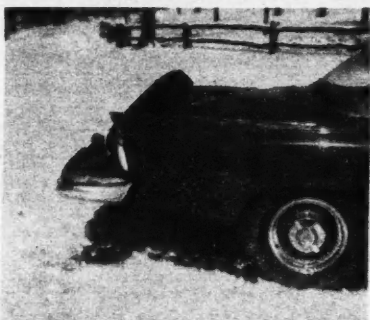
When a person spends several hundred hours working on a car, he has a subconscious urge to show off the results. For this reason, I would like to submit these photos for your evaluation and possible publication.

I am a pre-medical student in my senior year of college. For two years



of spare time, I have devoted my heart to the restyling of this '53 Stude Hardtop. I agree with many authorities that this car is "pure" in design, but I carried out the "sports type car" motif.

The modifications include: fender extension with the use of 1956 Packard taillights (perfect fit), full trim dechroming, Le Mans striping (with chrome tape), suspension modification for superior cornering, wire



wheel discs, full bumper dechroming, padded Naugahyde interior, exterior air cooled type exhaust (aluminum), exhaust port converted to rear brake cooling duct, 21 coats of (Mercedes Benz) silver lacquer, and a "sanitary" engine compartment.

I sincerely hope this car can qualify for a small space in your magazine. It does not compare to the featured cars of your publication, but I have incorporated some h.t. appeal into the basic Stude design.

Recently I sold this car to an individual so I could start my activities on a sports car. He said he didn't mind if I sent these pictures since all the work and change was mine.

It would be a pleasure to see the car in one of the forthcoming issues of Car Craft Magazine. It is a good magazine and the purpose it was supposed to fulfill has been intelligently carried out.

—Ben Millsbaugh,
Cherokee, Oklahoma

Being an admirer of the Studebaker design, I find that your treatment is one of the best to have crossed this desk. Congratulations, Ben, and thanks for the compliments.—Ed.

SEPTEMBER, 1959

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With LEFT FOOT THROTTLE you can use either foot on accelerator. Lets you ease off on gas as you apply brake, stop quicker and smoother. Reduces fatigue, avoids leg cramps on long trips. Only \$3.95 ppd.

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Always a CLEAN RADIATOR (COOL ENGINE) with amazing "NEUTRA-ROD." Stops rust, scale, electrolysis, boiling engines. Copper grounding chain, Neoprene insulators, Magnesium Element. Only \$1.95 PPD.

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Contains methyldecum liquid-metal (M₁₂S₂). Plates gears as you drive, reduces wear, QUIETS noisy transmissions, differentials, increases gas mileage. Terrific for Sports Cars, silent, EASY shifting. FULL YEAR treatment \$1.98 PPD.

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SUPER-TUNING

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Variety are Potent Performers with
"Know-How" Tuning*



AS THE POWERPLANTS in America's automobiles become more potent with each succeeding year, it becomes increasingly difficult for the neighborhood mechanic to cope with many of the problems created by this continual modernization campaign. The large bore, short stroke, overhead valve engines are capable of remarkable H.P. and torque outputs, but also present many problems that in mass production cannot so easily be solved. The different grades of gasoline obtainable by the American public along with the extremely high compression factor and the demand for smooth, quiet, trouble free operation tend to drag a necessary evil, often times referred to as "de-tuning", into the picture.

These necessary evils consist of such things as wide spread ignition curves to overcome the "pinging" noticed with cheaper grades of gasoline. The use of high air to fuel ratio's in search of that ever precious additional mile per gallon of gasoline and the high rear axle ratio now used as standard equipment in most new automobiles. All of these elements naturally tend to retard the performance factor.

One of the hottest showroom models, now in the hands of many performance minded car enthusiasts, is

Chevrolet's popular Impala with its potent powerplant. To these enthusiasts we direct this article. Of course, if your earlier model car's engine compartment conceals one of these late Chevrolet powerplants, then you too, can find the secrets to a super-tune up.

The Impala we have selected for the feature is owned by Ronnie Balen, a drag racing enthusiast from Pasadena, California. The automobile is equipped with the optional 348 cubic inch 315 H.P. engine, a 4.56 rear axle ratio with positraction and a set of special exhaust headers. We might add that all modifications found to be advantageous for the 315 H.P. engine also apply to the 348 cubic inch 280 H.P. and 335 H.P. engines (with the exception of valve clearances in reference to the hydraulic lifter equipped engines.)

After placing Ronnie's Chev on the Clayton chassis dynamometer and adapting various pieces of the testing equipment we are ready for the precision tune-up which would uncover the hidden horses necessary to make the Impala a real winner.

TEST #1

The first series of tests referred to on the accompany-

CAR CRAFT

THE IMPALA

BY JOHN GERAGHTY



Photos by Al Palocz

ing graph as test #1 netted a very poor H.P. curve. It was evident that several things were in need of attention, but in order to follow in a step-by-step procedure only one item was changed in this first test. The most prominent problem being on the secondary side of the ignition system. It was determined that one full heat range colder than the factory recommended spark plugs would be necessary to do the job. After installation of the spark plugs we were ready for test #2.

TEST #2

Although a considerable H.P. increase was evident it was quite clear that the factory wiring, designed as a resistor and equipped with a carbon center, would not carry the necessary secondary coil voltage to the spark plugs at high engine R.P.M. After replacing all spark plug wires with Packard 440 copper center cable and installing a new coil to distributor cap connector, we were now prepared for test run #3.

TEST #3

The increase in H.P. and R.P.M. was quite pleasing and our attention could now be directed to the carburetion system. The air fuel ratio meter in test #3 registered

15 parts of air to 1 part gasoline under maximum load condition. The desired fuel ratio for maximum H.P. is approximately 12 parts of air to 1 part of gasoline so it was quite evident that the mixture would have to be richened considerably. We calculated that a 10% increase in main jets would be necessary on the two end carburetors which are referred to as the secondaries, and 5% increase on the center or primary carburetor. This gave us .068 secondaries and .065 primary main jets. (*Directions and complete specifications on all carburetion modifications can be found in the special carburetion section accompanying this article*).

TEST #4

Our next step showed us we were nearing our goal. The fine tuning, or sometimes referred to as super-tuning, could now begin. An exact distributor curve could be plotted and installed into the stock distributor. This is accomplished by locking the distributor into a position that would eliminate both the automatic and vacuum advance. The timing marks located on the crank pulley are extended to 40 degrees before top dead center. The engine is now put under maximum load at a particular

SUPER-TUNING THE IMPALA



R.P.M. and the distributor is advanced and retarded until the point is found which produces maximum horsepower. This is repeated throughout the complete R.P.M. range and accurate records listed to show the amount of advance required by the engine to produce maximum H.P. This curve is then installed into the distributor by the use of different weights, springs and stops. Desiring high R.P.M. H.P. the distributor points were installed with great care and a setting of 30 degrees of dwell was found to be best. It was also discovered that in able to turn the distributor over 6000 R.P.M., a small piece of rubber had to be installed behind the point arm to eliminate point vibration. (*Directions and complete specifications on all ignition modifications can be found in the special ignition section accompanying this article.*)

Having perfected the ignition we now directed our

attention to trimming the edges off the carburetion system. To smooth the openings of the secondaries and reduce the over rich accelerator pump action, the pump arms on both secondary carburetors were removed. A .070 main jet was installed in both secondary carburetors and .063 main jets were installed in the primary carburetor. Both return springs located at the throttle shafts on the secondary carburetors were stretched to reduce tension. This not only made the secondary carburetors easier to open, but also eliminated the possibility of a partial closing of the secondaries at "O" vacuum.

TEST #6

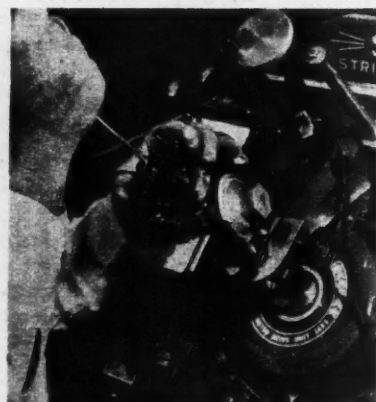
Our next progressive test showed no increase in horsepower, but the smooth throttle response was very noticeable.



1. Stock distributor is checked before modification to determine the wear.



2. After determining the travel of the distributor weights, drill a small hole.



3. Self tapping screw used to stop the distributor weights in desired position.

TEST #7

A valve setting of .008 intake and .012 exhaust, instead of the recommended .008 intake and .018 exhaust, was tried. This was done with the intention of extending the H.P. range of the engine, increasing the valve lift and duration of the exhaust. It seemed to work quite well as you can see by the upper end of the power curve on the chart concerning test #7.

From observation of the power curve it was also quite evident that an undesirable flat spot was found throughout the low R.P.M. range (this is a normal problem with all long duration camshafts). It was decided to advance the camshaft 2½ degrees which is equal to 5 crankshaft degrees, as the camshaft turns ½ the speed of the crankshaft. This opens and closes the valves sooner, and therefore increases the torque characteristics of any camshaft.

TEST #8

Wringing out the Impala once more on the dynamometer found everyone in agreement and satisfied with a job well done.

Ronnie Balen holds the Central California Grand Championship single and two way records, and local drag strip records, with speeds of 102 plus and low elapsed time of 13.80 seconds. After three separate pro-tests which netted demands for two complete tear downs, the engine was found to be without a doubt perfectly stock. Needless to say, Ronnie is still out at the local drag strip getting his Sunday trophy.

The exact step-by-step procedures on conversion of both the ignition and carburetion systems can be found on the following pages.

BASIC OPERATION

There are six basic systems incorporated in the Rochester 2-jet carburetors used in the triple two-barrel installation. They are float, idle, part throttle, power, accelerator pump and choke.

All six systems are used in the center or primary carburetor while the secondary carburetors (front and rear) have the float, part throttle and accelerator pump systems only.

During partial throttle operation the primary carburetor distributes the air fuel ratio while the secondary carburetors remain inoperative. The secondary carburetors are engaged in the following manner. A vacuum switch located on the primary carburetor is

| RPM | TEST #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
|------|---------|-----|-----|-----|-----|-----|-----|-----|
| 2000 | 75 | 85 | 85 | 90 | 105 | 105 | 95 | 115 |
| 2500 | 90 | 95 | 95 | 101 | 125 | 126 | 121 | 135 |
| 3000 | 120 | 132 | 135 | 142 | 145 | 144 | 142 | 174 |
| 3500 | 145 | 158 | 160 | 175 | 178 | 180 | 174 | 209 |
| 4000 | 145 | 164 | 172 | 215 | 218 | 218 | 225 | 236 |
| 4500 | 130 | 170 | 185 | 226 | 230 | 230 | 236 | 246 |
| 5000 | | 161 | 196 | 230 | 236 | 237 | 245 | 254 |
| 5500 | | | 182 | 212 | 230 | 230 | 240 | 238 |
| 6000 | | | | | | | 232 | 220 |

Comparative H.P. chart in relation to dynamometer tests.

operated by a tang on the accelerator pump lever. The vacuum switch is connected directly to the vacuum booster side of the fuel vacuum diaphragm which is connected to the front carburetor throttle lever.

When the primary carburetor throttle valves open approximately sixty degrees the vacuum switch opens and the vacuum from the booster pump is applied to the diaphragm. This opens the throttle valves on both secondary carburetors simultaneously distributing the remaining necessary air fuel ratio.

MODIFICATION OF THE STOCK IGNITION SYSTEM FOR TOP PERFORMANCE:

Let's not allow ourselves to become involved in basic electronics, as we can eliminate most of this and go on to a simple step-by-step "how-to-do-it" article which in this case I believe we are more concerned with.

We suggest a local tune up shop be kept in mind to calibrate the final touches of this ignition modification on a distributor synchronizer.

We will begin with the removal of the distributor. The distributor cap is removed first and a note is taken on the position of the rotor. This determines the position of the distributor and must be replaced in the same location. A hold down clamp and bolt are now removed along with the vacuum advance line and the distributor is lifted gently, then removed.

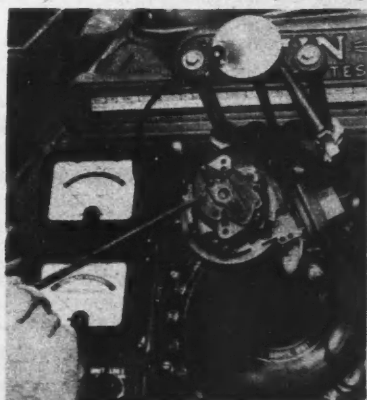
Before the modifications begin we must determine the condition of the distributor. The distributor shaft bushings are checked for any excessive clearance by moving



4. Excess length of set screw is cut allowing rotor to fit over the weights.



5. Grind a small slot in weight to clear screw stop used for mech. advance.



6. Modified distributor assembled depicting mech. advance stop installed.

SUPER-TUNING THE IMPALA

the shaft sideways, this is very important. Bad distributor bushings will cause the opening of the points to vary. The distributor plate is also checked for any excessive looseness by trying to move the plate up and down by holding to condenser or any other part of the outer edge of the plate. If there is any looseness apparent, the plate should be replaced as it will cause erratic point vibration and also will cause the vacuum diaphragm to function improperly. We suggest the installation of a ball bearing plate, available at most parts stores.

If a distributor synchronizer is available it is recommended procedure to run the distributor from "0" R.P.M. to approximately 4000 engine R.P.M., keeping track of the stock ignition curve and observing the condition of the point cam, by the firing location of each cylinder. A variation of 1 degree allowed for maximum performance. (The distributor advance curve is listed by distributor number and is available in most repair shops. The wear of the cam can be detected by using micrometers across the top part of the lobes and comparing figures if a synchronizer is not available.)

The distributor is now ready for modification. The first change concerns the ignition spark curve. For those who do not have a chassis dynamometer in the immediate locale, a good relative formula to determine a curve that would be advantageous in your particular case can be accomplished by following these simple steps. Remove the necessary parts to leave the mechanical advance mechanism exposed, determine the approximate amount of travel, as illustrated in the step-by-step photo story. This can later be adjusted by filing as necessary to increase the travel to the recommended point. The examination of the stock distributor curve shows us that the distributor is continually advancing as high in some cases as 2000 distributor R.P.M.'s depending on the make and year of the car in question. A certain amount of advance is evident at 1250 distributor R.P.M. This figure in most cases is the point that maximum lead is actually necessary for maximum power. It is also noticed at this point that the total amount of the curve compared to the figure the stock curve gives us, is short by the average of 8 or 9 crankshaft degrees. The installation of a self tapping screw solves this by stopping the curve at 1250 distributor R.P.M.

The original timing marks can no longer be used, therefore a relative position must be determined. A re-examination of the original curve will show a maximum amount of advance. Because the crankshaft speed is twice that of the camshaft and distributor, the maximum distributor advance figure must be doubled and the initial advance recommended by the factory is added. This gives us the total amount of advance required. The total curve of the reworked ignition is now doubled and this figure subtracted from the complete original curve. This figure is used as the new initial timing figure. (The example of this process can be seen in the "Modified Distributor Curve" chart.)

Original equipment points and condenser are recommended for installations of this type, along with proper care in examining all necessary leads to cancel out any chance of a positive to ground connection. Alignment of the point faces is as important as the proper point

settings. In all cases the factory setting is recommended. Without these two factors a high R.P.M. distributor unit is impossible. After a complete double check the distributor is ready to be installed in the same manner as it was removed, keeping in mind the original rotor position and using the new timing mark location.

Now with the examination of the coil, resistor, distributor cap and rotor, the modified distributor unit will produce the additional boost necessary to take you out of that "second class" position.

EXAMPLE ONLY ORIGINAL DISTRIBUTOR CURVE DIST. R.P.M.

| | AMOUNT OF ADVANCE |
|------|-------------------|
| 500 | 3 degrees |
| 750 | 5 degrees |
| 1000 | 9 degrees |
| 1250 | 13 degrees |
| 1500 | 14 degrees |
| 1750 | 15 degrees |
| 2000 | 17 degrees |

Total amount of advance times crank speed equals automatic advance. $17 \times 2 = 34$. 36 degrees being desired. Two degrees are initially given as recommended timing mark.

MODIFIED DISTRIBUTOR CURVE DIST. R.P.M.

| | AMOUNT OF ADVANCE |
|------|-------------------|
| 500 | 3 degrees |
| 750 | 5 degrees |
| 1000 | 9 degrees |
| 1250 | 13 degrees |
| 1500 | 13 degrees |
| 1750 | 13 degrees |
| 2000 | 13 degrees |

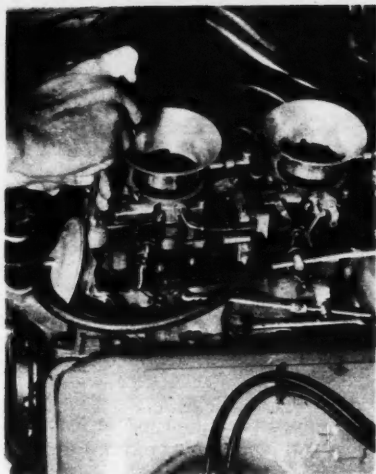
Total amount of advance times crank speed equals automatic advance. $13 \times 2 = 26$. 36 degrees being desired. Ten degrees are needed for initial timing mark.

Now that the directions and step-by-step procedure are completed, I'm sure you will find the first touch of the throttle quite a revelation in new performance. The real test is your local drag strip. The following modifications of super-tuning have worked for me—if followed correctly, I see no reason why they can't send you home a winner too.

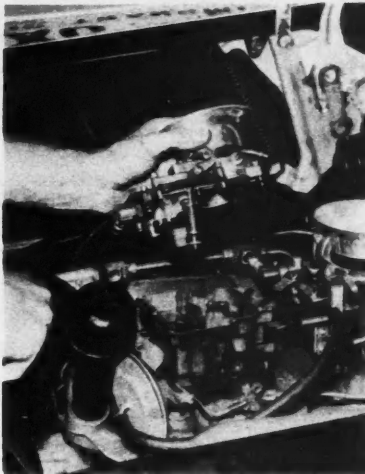
| CARBURETOR No. | FRONT | CENTER | CENTER | REAR |
|-----------------------|---------|--------------|--------------|---------|
| | 7011951 | 7012503 Syn. | 7011952 A.T. | 7011953 |
| | 7012851 | ----- | ----- | 7012853 |
| SMALL VENTURI | 1 1/4" | 1-3/16" | 1-3/16" | 1 1/4" |
| LARGE VENTURI | 1/2" | 1/2" | 1/2" | 1/2" |
| MAIN METERING JETS | .070 | .063 | .063 | .070 |
| IDLE NEEDLE HOLES | — | .046 | .040 | — |
| SEC. DISCHARGE HOLES | LOWER | — | .033 | .028 |
| | MIDDLE | — | .029 | .029 |
| | UPPER | — | .035 | .032 |
| SPARK DRILLINGS | — | (2) .040 | (2) .040 | — |
| PUMP JETS | .030 | .026 | .026 | .030 |
| POWER RESTRICTIONS | — | .048 | .051 | — |
| CHOKE RESTRICTIONS | CHANNEL | — | .089 | .089 |
| | BY-PASS | — | .040 | .040 |
| IDLE TUBE RESTRICTION | — | .029 | .031 | — |

Above is pictured the basic specifications of triple carburetion for both the standard and automatic transmissions.

CAR CRAFT



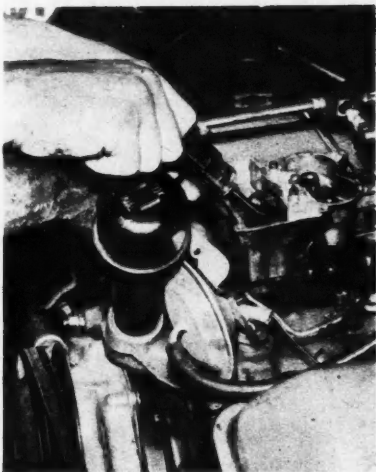
1. First step is to remove screws in air horn to gain access to the main jets.



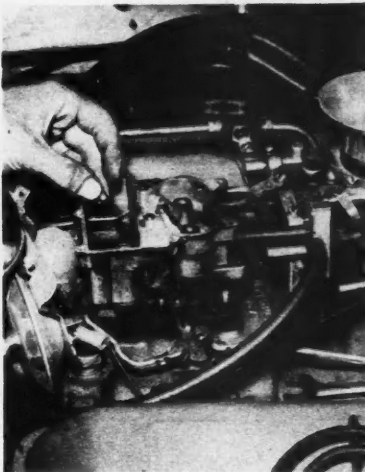
2. After removal of air horn (upper section of carburetor) jets are removed.



3. Photo above of Rochester carburetor; arrows point to main jets position.



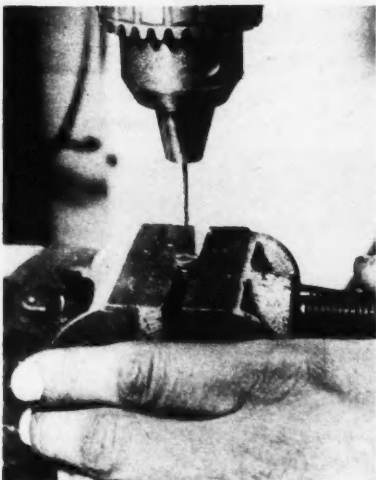
4. The main jets are now removed with use of common screwdriver as shown.



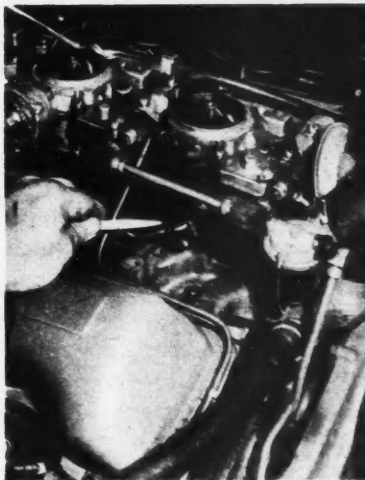
5. Remove main jets. Take exceptional care not to drop jets into the venturi.



6. Before drilling main jets it is good practice to check size with wire gauge.



7. A drill press and vise should be used when enlarging the size of jets.



8. After assembling, springs of both secondary carbs should be weakened.



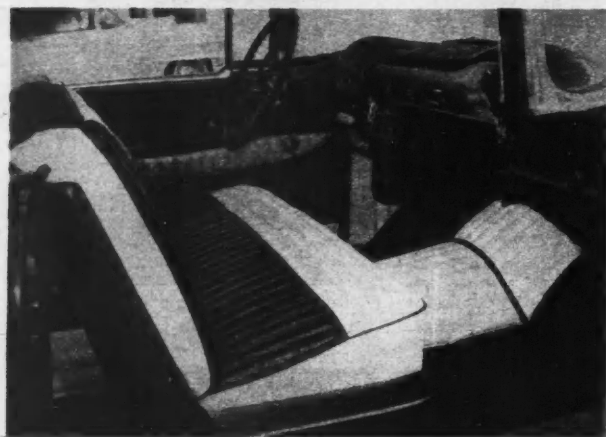
9. A progressive linkage system may be installed if permitted by drag rules.

With more than enough – you have to agree that John Mosklto's custom Chev is a –

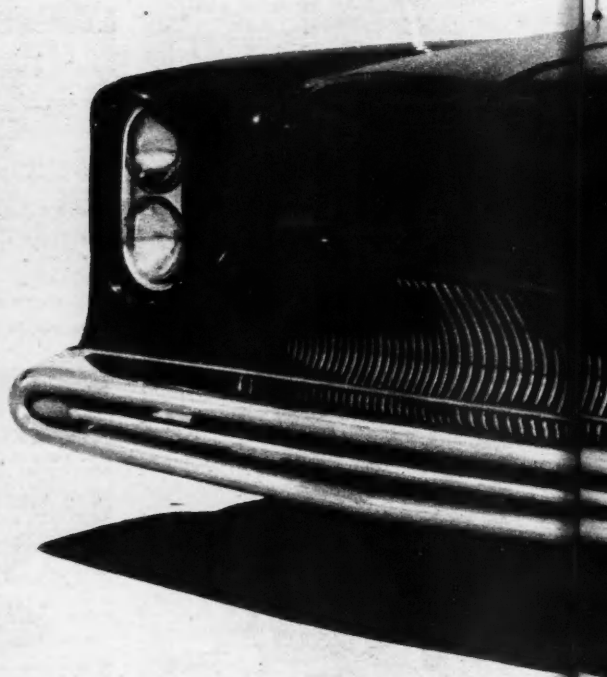
TIP-TOP HARDTOP



Strictly decorative, the trunk features inset panel made of perforated metal with chrome trim pieces from '55 Cadillac. Round rod was used to construct rolled lip comprising oval assembly housing; note the center peak.



Black and white Naugahyde features unusual design; white rolls run perpendicular to dark pleats, trimmed with black piping. Padded section is added to dash and transmission housing. All interior moldings are chrome.



Photos by Frank Faraone

Vertical quads are of '58 Chev origin, tunneled into frenched opening. Extended hood meets concave '54 Kaiser grille protected by '57 DeSoto bumper/grille bar with floating center bar capped by plastic turn lights.

CAR CRAFT



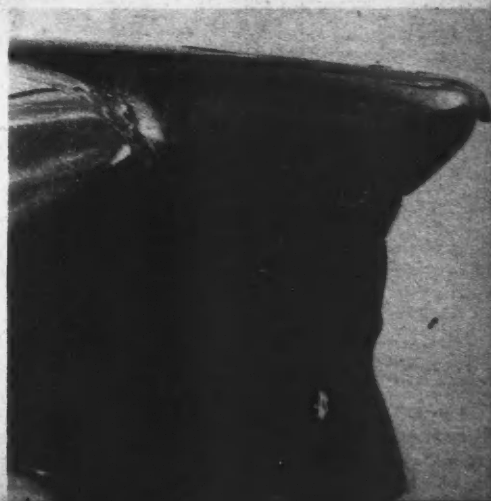
DeSoto unit identical to front is used for rear; fender extends over bumper due to the deep-set location. Exterior color scheme is an Organic Purple lacquer job.



Johnny Moskito of Newark, California, commissioned Harold Belshaw's shop in Fremont, California, to produce metalwork from Moskito's designs and drawings.

Taillight unit is constructed of two '56 Lincoln lenses glued together, mounted in frenched opening. Fender is slightly extended; top edge forms lip over lens.

SEPTEMBER, 1959



THE DAY THE

By Carl Kohler



... It's all about a frantic threat facing every custom car cat!

DOLLS TOOK OVER

"LISTEN, DAD," quavered the voice on the phone, "I wanna give you an exclusive interview. All about a frantic threat facing every custom car cat. You split over here, and it's like confession time."

"Who and where are you?" I asked.

"Waldo McWilde, I'll be waiting for you the back booth at the Tool Inn. Hurry, dad. I wanna go through with this blabbermouth bit before I come to my senses."

"I'm practically there," I assured him.

The Tool Inn is a crummy little cafe in a section of Hollywood that went out with silent pictures. As I drove, I wondered if McWilde really had a story or if this was just another blind alley. Ordinarily, I'm as leery as a worm at a robin rally when it comes to guys phoning me material. Like the clown who called last week, insisting Detroit is retooling for all-out production of chromed go-karts to fight the foreign, small car invasion. In my business you have to use discretion. Anyway, McWilde sounded pretty sincere.

Reaching the Inn, I found Waldo McWilde hunched down in the back booth. He had the air of a guy with a price on his head, and he looked as though he hadn't slept since he was ten years old. I signaled for two coffees and slid into the seat opposite him.

"You Kohler?" McWilde inquired carefully.

I nodded, holding up my notebook and ballpoint.

"I'm down in flames and I know it, see?" He gulped at his coffee. "I just didn't read the score until the game was over. I mean, it was no contest, dad."

"Start from the beginning," I suggested.

McWilde took another, shuddering pull at his coffee and stared bleakly into space.

"Well, dad, I had this wild car. Chopped. Channelled. Lowered just to the right inch. A real eye-popper. The interior was all pearl-grey Naugahyde. The exterior was sixty-two coats of Candy Apple Red lacquer. A real swinging color, you know. Dad, I mean that car was the sweetest sight that ever crawled through traffic."

"Okay," I said. "You had this fine car."

"Then, one day, I met Dollgirl," McWilde winced, but his face took on a dreamy expression. "Little-red-head. Big brown eyes. Skin like fresh cream. I mean, I took one look at her and quit collecting stamps in my spare time."

"That good, eh?"

"The wildest thing since bubble-gum, dad. What with the car and Dollgirl, I figured I had it knocked. She even dressed in outfits that matched the car's Candy color. When we drove through town, crowds cheered and all like that."

"Where's the problem?" I asked.

"Getting to it," murmured McWilde. "From the day I got Dollgirl and my car together, trouble began arriving like it was gift-wrapped. Be sure you make a note of that, man. It was nothing but difficulty in overdrive from that day to this."

I made a note of it.

"At first, it was only the usual, minor things like lipstick all over the upholstery. Nothing really serious, you understand. Just the usual stuff. When I vacuumed the interior—I picked up a ton of bobby-pins. A guy expects this kind of jazz when you got a doll."

I nodded in agreement.

"One day, she makes me toss out the shrunken head and the giant dice and all the other wild goodies I kept dangling over the dash. Doll girl had an appetite like a starved tiger. She began hanging bunches of grapes, oranges, bananas and strings of bologna over the dash. She began keeping candybars and sacks of pastries in the glove compartment. First thing I knew, the car started smelling like a garbage can."

I retched in polite sympathy.

"Pretty soon," continued McWilde, "I had trouble even locating the foot-pedals for all the candy wrappers, popcorn, fruit and empty malt containers strewn on the floorboards. Between the lipstick, candybar and mascara stains on the seats, the Naugahyde upholstery was out of sight!"

"It was like spring cleaning seven days a week, dad, to keep up with the mess."

"Sounds rather heady, all right," I said.

CONTINUED



... Dollgirl kept reassuring me that it was alright because her hound was supposed to be a lap-dog?

GLENDALE GEAR-GIRLS CLUB



... my car was taking sweepstake trophies like they were going out of style!

"This was only the beginning," groaned McWilde dismally. "Dollgirl was careless about a lot of other things. She could never remember to replace the loudspeaker on its stand when we left drive-in movies. Dad, we tore that door off its hinges like on schedule. I finally had to weld it on to stop the damage!"

"Strong cables on those loudspeakers," I mused aloud.

"Then, there was this evil kid brother. Man, that kid was strictly from wickedville. Everytime I went over to Dollgirl's pad and left the car outside untended for even a few minutes - this kid got busy chalking out areas for scoops and general trim work right on the finish of the car. I finally had to chain chalk easers to the spotlights."

"Bright little monster, wasn't he!" I commented.

"Yeh, but I got him off my back by going into hock for a beatup old stock jalopy which I gave him to play with. Even *without* a mill in it, it

cost me my lunch money for nine weeks."

"That was using the old head," I told him.

"A Vic Tanny grad never lost weight any faster," snarled McWilde bitterly. "I mean, nine weeks without lunch is a tough route."

"That's life," I pondered. "One darn sacrifice after another. Well, what happened next?"

"I really goofed," He beat the tabletop softly with a tightly clenched fist. "I went and really goofed, dad! I started letting Dollgirl borrow the car now and then. At first, it wasn't so bad. I almost went nuts readjusting the rearview mirror each time after she'd used the car. And there was the seat-adjusting bit too."

"Seat-adjusting?"

"Yeh, I hadda keep shoving the seat back so I wasn't jammed up against the windshield. Dollgirl kept cramming it forward. I kept shoving it back. Forward, backward, forward, backward. It was like war.

Then, she played dirty pool and took the car to a body shop and had the seat welded to fit her leg-reach. Welded yet! After that, I couldn't drive the car. It was too much like being top sardine in an economy-size can!"

"Cheeez!"

"So Dollgirl and I worked out a deal where *she* picked *me* up at my house when we went out." McWilde held his head in his hands, pure shame contorting his features. "She started showing up at my place, at night, leaning on the horn and yelling things like: 'Make tracks, kiddo—I ain't swinging this way twice!' It was horrible. The whole neighborhood took to complaining to my folks."

"Ye gads," I gasped.

"Oh, that wasn't the worst part," murmured McWilde in a low sob. "Doll-girl's got this huge dog. I mean, he was like glandular trouble on four feet, Dollgirl refused to go anywhere without the hound. Since there just wasn't room enough for us to sit three across, I hadda park myself on the dog's lap."

"You sat on the *hound's* lap?" I yelled disbelievingly.

"Well, man," said McWilde defensively, "*he* was *bigger* than *me*. Besides, Dollgirl kept reassuring me it was all right because he was supposed to be a lap-dog."

I tried to mask the pity in my face by clanking the coffee cups at the tired witch behind the Inn's counter. *No wonder the chap looks defeated, I thought. No wonder, after the scene he's been put through.*

"From that point on, it was all downhill," said McWilde in a hoarse whisper. "Dollgirl hogged the car all the time, only bringing it around when she needed bread for gas—and most of the time she didn't even show up for that. I started getting long distance phone calls, three or four times a week, telling me she was out of gas. Naturally, I had to wire her the loot. After all, I was still the registered owner. I finally hadda ask her to stop calling me collect, though. It was like fulltime bankruptcy. I found a second job at night and gave up eating lunch again."

Silently, I gripped his shoulder to show I understood.

"Dollgirl promised me she would see to it that the car was displayed at all the Car Shows, but when word

THE DAY THE DOLLS TOOK OVER

drifted back regarding the way she was displaying the car—I pleaded with her to drop the responsibility.”

“Why?”

“Listen,” said McWilde in anguished tones, “Would you want *your* fine little custom shown off in public with guitars strung all over it, pictures of the top rock ‘n roll brass parked on the hood and a big, stupid lap-dog—wearing a ribbon yet while strumming a village guitar baying to ‘I’m Goin’ To Kansas City.’ This while thousands of car-lovers passed by, howling their lousy heads off with amusement?” Tears glistened in his bloodshot eyes. “Dollgirl ignored me like I was thin air.”

“Odd, to say the least,” I murmured.

“Odd my thumbnail,” wailed McWilde. “Even with the guitars, the crummy photos and that stupid hound—my car was taking sweepstake trophies like they were going out of style! Dollgirl was mad with power now. She formed a car club made up of other chicks who had pilfered cars from *their* boyfriends. The whole gang of them began dragging around town!”

“Fantastic!” I breathed.

“Made themselves club jackets and everything. Call themselves the GLENDALE GEAR GIRLS. The last I heard, they were waiting for their charter from the NHRA.” There was a long, depressing silence broken only by the sound of McWilde grinding his molars.

I sat back, studying my notes.

“This is the story of the year—if it’s true, Waldo. But how do I know you aren’t just making all this up to get your name in the magazine?”

He smiled wryly.

“Have a gander at what’s bopping down the avenue this very minute, dad,” suggested McWilde—his face turning white. “THERE GOES DOLLGIRL NOW!”

I had a brief glimpse of a mottled, pink coupe whizz-

ing by at a spirited clip. Behind the wheel sat this redheaded doll with what looked like a huge mongrel sitting beside her. I turned to McWilde.

“But you told me *your* car was Candy Apple Red.”

“It was,” he moaned painfully. “Dollgirl and her friends held a finger-painting rally and slopped that gaudy pink over those sixty-two coats of hand-rubbed lacquer. I get sick to my stomach, everytime I think about it.”

We rose and shagged to the sidewalk outside.

“I’m going to use your story,” I informed him. “Maybe it will help some other guy avoid your mistakes and keep him out of the terrible mess you’re in.”

“Thanks, dad,” he said simply.

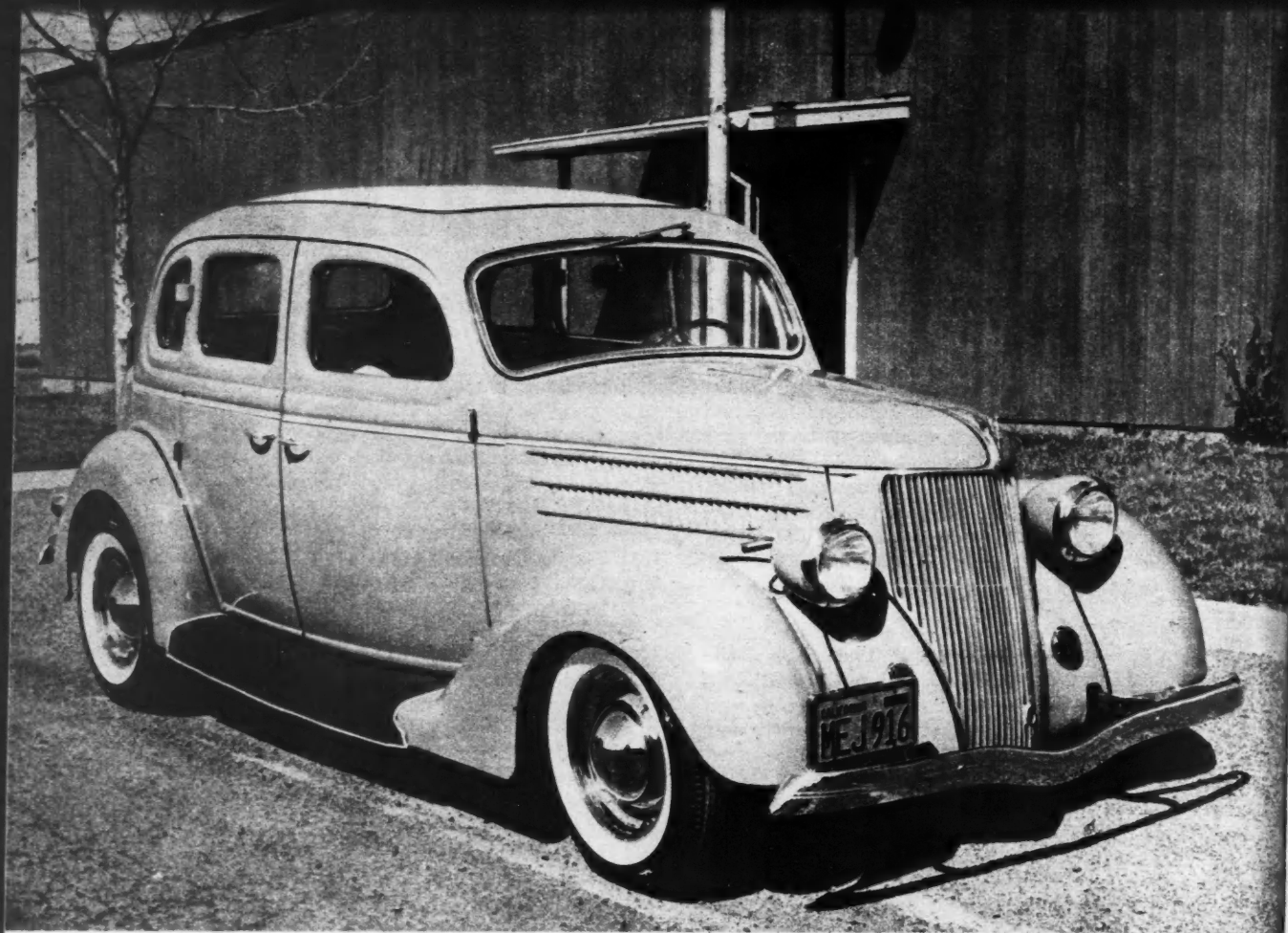
“One last item,” I said. “You haven’t told me how you are getting around these days, now that Dollgirl took over your wheels. For example, how did you get way out here in this extinct neighborhood?”

McWilde’s face assumed a shifty expression. He dropped his eyes and furtively glanced in other directions. Then suddenly he stepped back into the shadows—disappearing into the dark alley behind the coffee shop.

I couldn’t figure it—him just walking away so mysterious like without answering. But humiliation is the complex of complexes, and McWilde surely had his load.

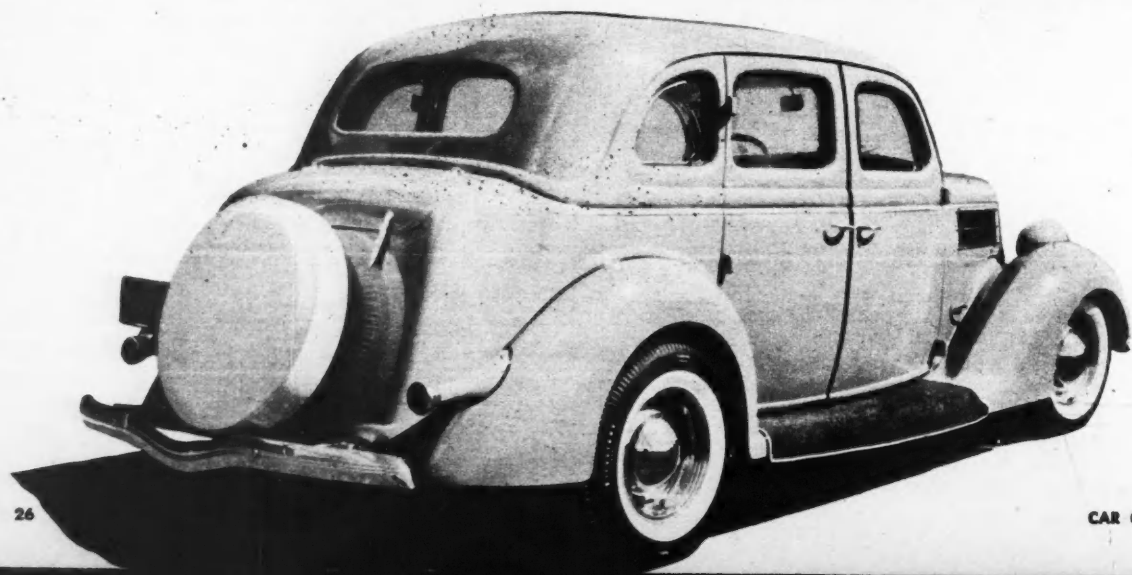
While crossing the street, preoccupied with thoughts of McWilde’s weird tale, I was startled by the roar of an engine behind me. Quickly turning, I saw this object coming at me. I leaped for safety, just making the curb in time as this low-slung vehicle came charging out of the dark alley and careened down the dimly lighted street followed by the echo of a whining engine. I may be wrong, or better yet, you may think I’m striking for a bench at the state hospital—but I could swear that it was McWilde... on a go-cart!

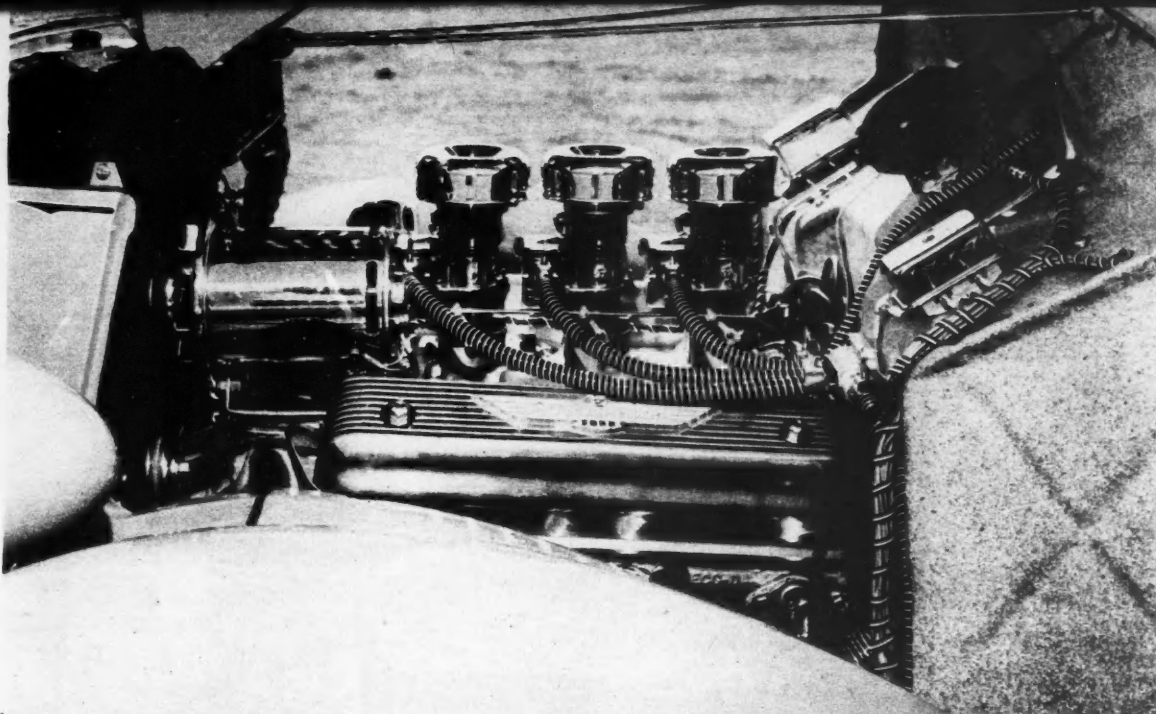




A REAL WINNER

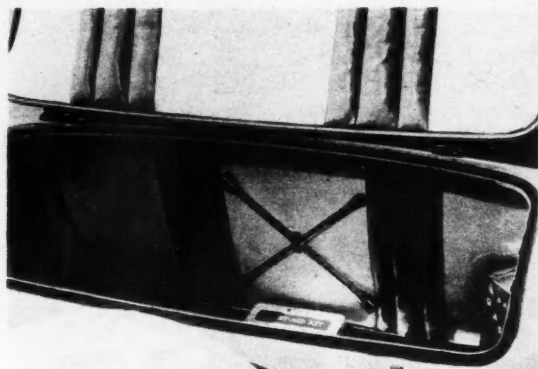
**Beautifully restored '36 Ford
chalks up ten straight first place awards**





Extremely neat engine compartment illustrates sound workmanship and fine construction employed by Jim Adamson of Vallejo, Calif. Potent '55 Thunderbird powerplant is connected to '39 Ford trans via Cragar adaptor in Adamson's '36 Ford sedan. Decorative wire, hose covering adds spice to Zola-toned firewall. Visible components have been chromed.

Photos by Frank Faraone



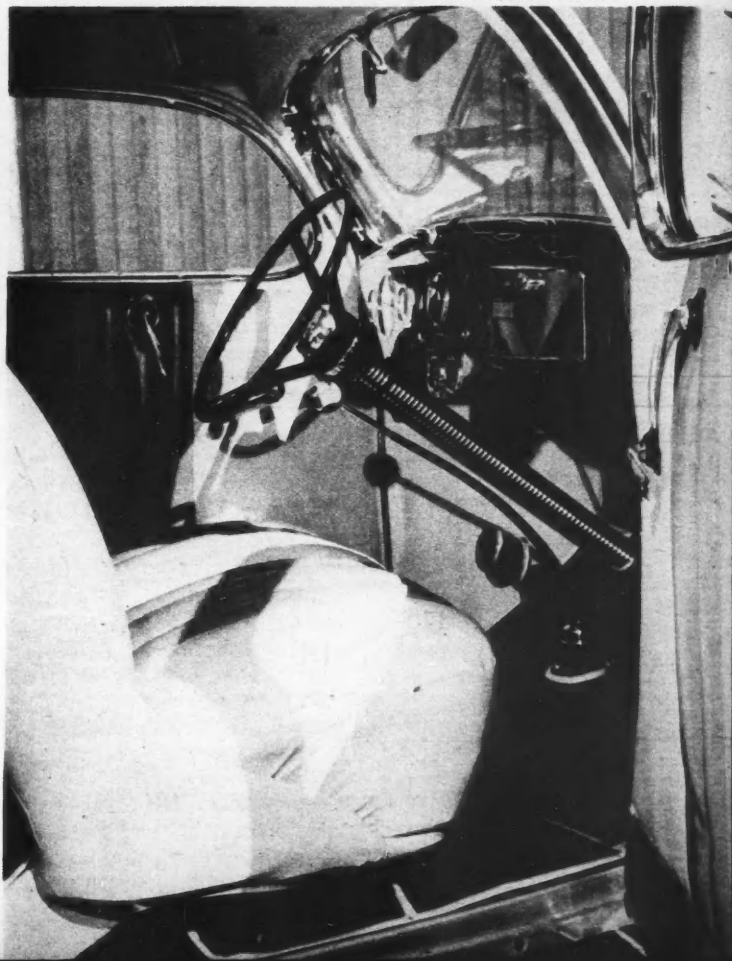
Turtle-deck trunk compartment and underside of lid, received white Naugahyde with pleated brown panels for glamorizing. Safety and road equipment included.

ABOVE LEFT. The sedan was restored to its original stock condition, and then updated by rechroming of the trim, and the covering of the runningboards.

LEFT. 2 1/2" dropped front dagoes Ford slightly. Adamson substituted '39 steering gear, '40 brakes and spindle. Stock wheels front; reversed, chromed on rear.

Spic 'n span interior, upholstered with brown and white Naugahyde by M&J, Vallejo. Color blends with buff enameled exterior. Note ribbed column, 'Bird wheel.

SEPTEMBER, 1959





ROLLED PANS

Customizers borrow a classic feature from the roadster boys - for late model restyling

By Darryl Starbird

ROLLING THE REAR PAN on early model roadsters has long been an established procedure for cleaning up the otherwise jumbled body lines. But only fairly recently has this idea been adopted by owners of late model cars for an integral part of their car's styling. At first it may seem that the installation is quite involved but actually it is a fairly easy operation. There are three basic methods which may be used. One is to add sheet metal to the car's stock pan, rolling it under. This is the easiest way but only certain late model cars have the right type rear pan and fender combination to allow

it. Another is to build a completely new rear pan from sheet metal, forming it to blend with the design of the car. This is the most versatile method as it allows you to use any design you wish. The last is to use a section cut from a long, late model fender which has a rolled curvature suitable for the adaptation. No matter which method is employed, the same steps as shown in the following photo story will be used for the mounting of the rolled pan. A good plan is to make a cardboard pattern for experimenting before beginning the actual labor. Much grief can be saved by doing so.



Sectioned '49 Ford shown at top of page is excellent example of smooth styling created by rolled pan on rear.

Rear of the '59 Chevrolet Impala takes on bulky but clean appearance with installation of large, curved rolled pan.

The '57 Ford installation is similar to one shown in the photo story. Expanded metal and scallops are for accent.

Sculptured effect is gained by '55 Chevrolet with a wild version of a rolled pan. Notice deck peaks run into pan.

SEPTEMBER, 1959

CONTINUED

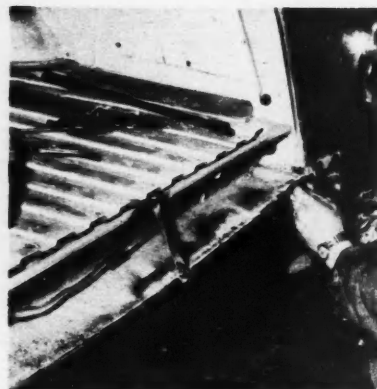




1. Remove bumper and the stock pan from rear of car, grind down the edges.



2. This is the rolled rear pan cut and formed to fit, as explained in the copy.



3. Tack a brace in center of the pan to hold in position, braze ends to body.

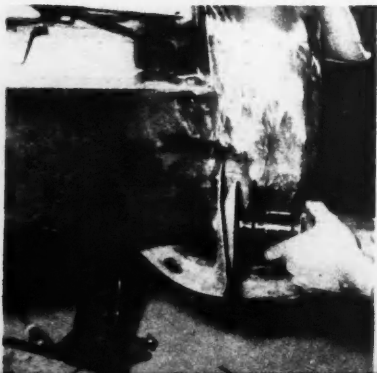
4. Remove brace and braze rolled pan solidly across the rear body panel.



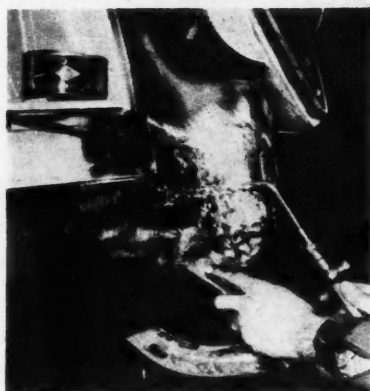
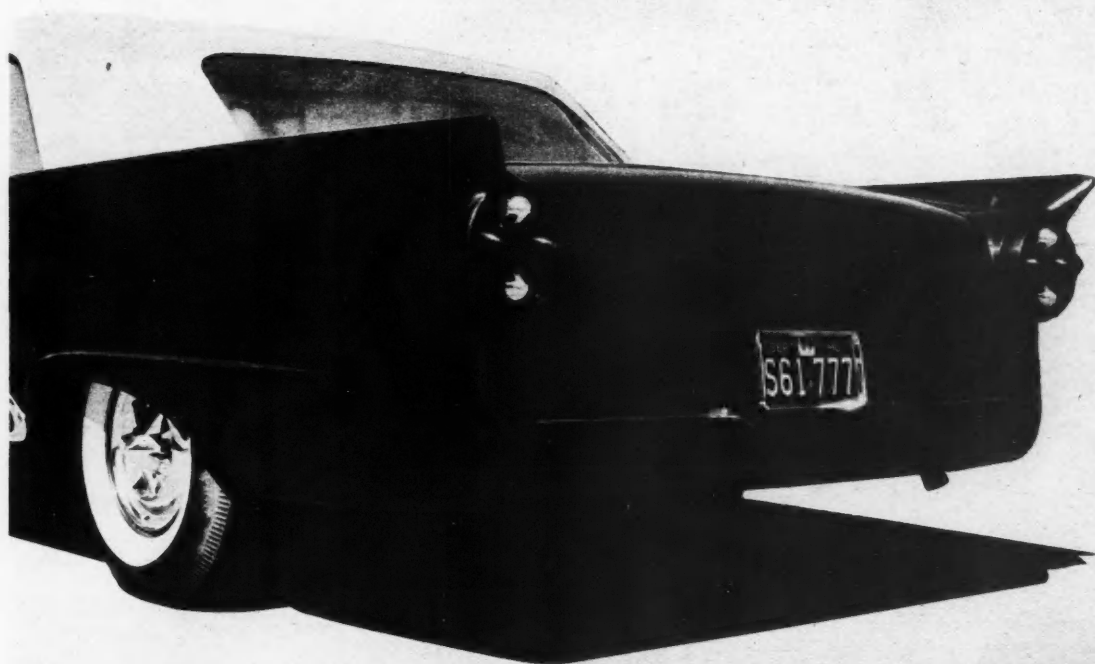
5. Filler pieces must be cut, brazed in place between the pan and the body.



6. Grind down bare metal area, clean weld bead thoroughly with rotary stone.



ROLLED PANS



7. Go over surface to be leaded with tinning compound, then wipe it clean.



8. Apply stick lead to surface, shaping to contour with a wooden paddle.



9. Again grind down the surface. Work leaded section smooth with a body file.

10. Remove file marks and imperfections by block sanding with wet paper.

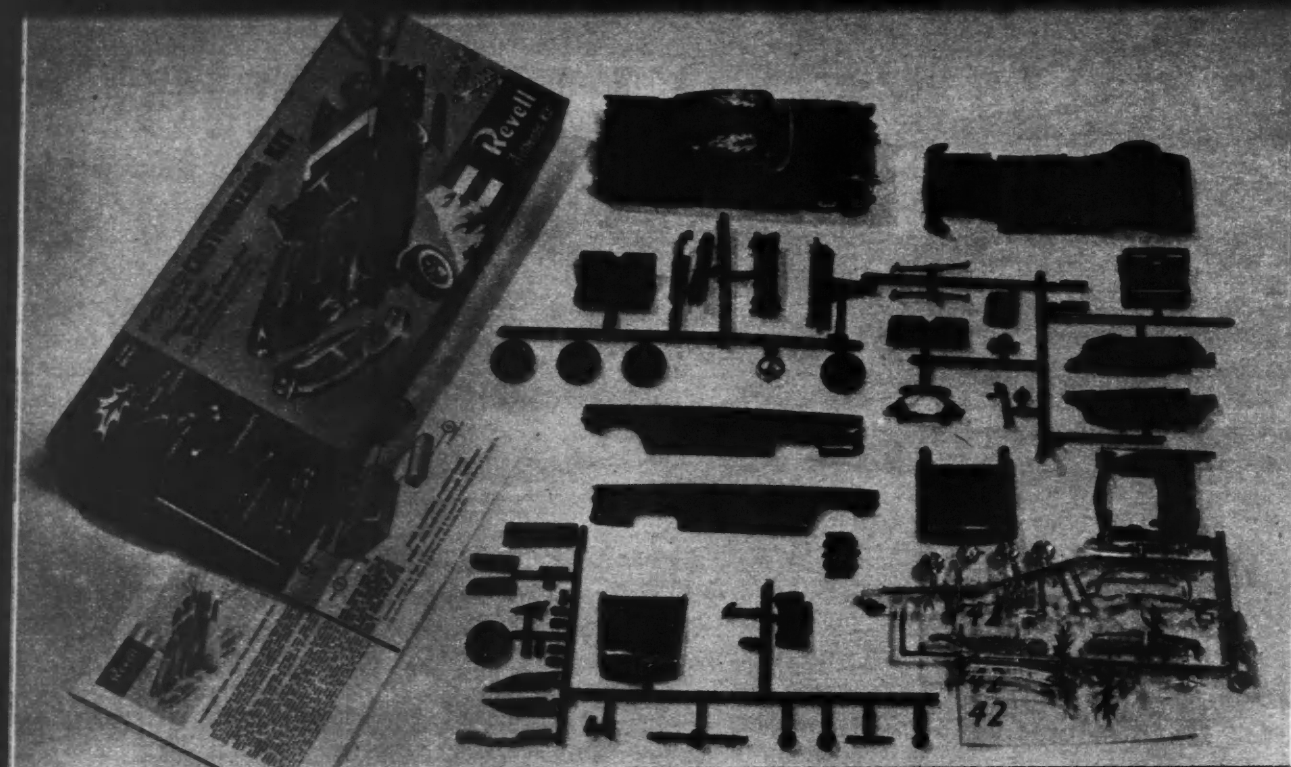


11. Clean area thoroughly with wax and grease remover, apply metal prep.



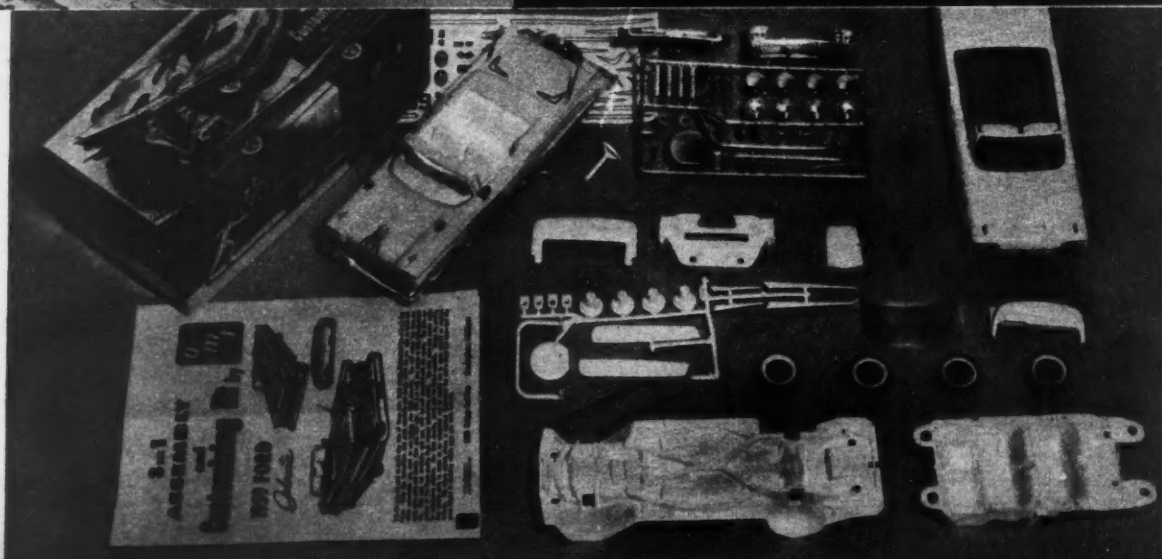
12. Spray on primer coats, sanding between each coat. Finish coat is next.





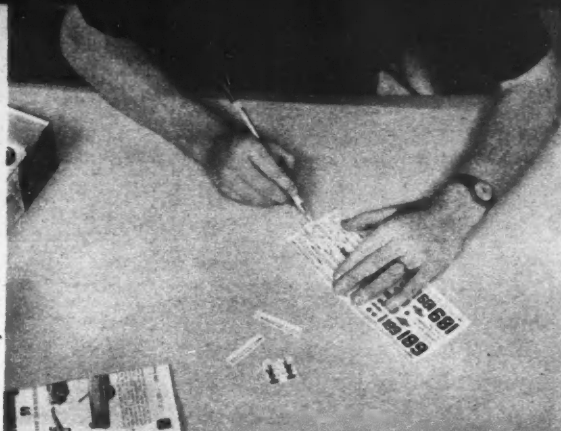
NEW CUSTOM CAR KITS

Manufacturers introduce
plastic models for
custom car enthusiasts





Kits are authentic in every detail. Here, finishing touches are given engine installation. Note louver/flame decor.



Both kits include decal sheet of scallops, flames, and striping for easy restyling. Bold numbers are for stock car racers.

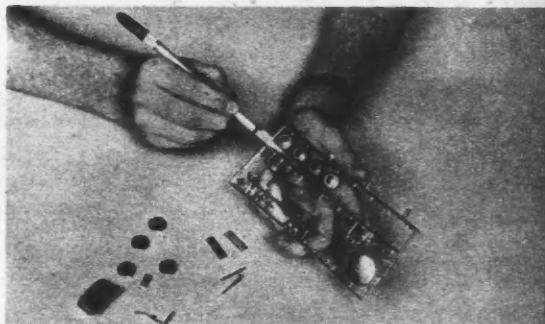
By Jim Gilbert

FOR QUITE SOMETIME, young and old enthusiasts of custom cars have been experimenting, designing, building, and enjoying the construction and display of plastic automobile kits. The big drawback in the past has been the difficulty involved in transposing a stock model kit to custom appearance. Needless to say, the work of creating your own accessories and special custom appearances was a tedious craft.

Today, model car enthusiasts needn't labor over this problem. Two manufacturers, AMT and Revell, have recently supplemented their line of models with a new kit designed exclusively for customizing. Unlike their predecessors, these kits allow quick, easy assembly with no parts substitution necessary.

All makes and models of the latest automobiles are available to the builder. For customizing, there are all of the latest accessories such as chromed lakes plugs, Moon and spinner hubcaps, accessory grilles, bullets, dual spotlights and antennas, scallops and striping, skirts, Continental kit, and special taillights.

Many different fields can be explored with these kits, most of all, the pure fun of building one. The kits are available at leading department, drug and hobby stores. If they are not available in your locality, we suggest you write: A.M.T. Corporation, 21535-cc Groesbeck Hwy., East Detroit, Michigan or Revell Inc., 4223-cc Glencoe St., Venice, California.

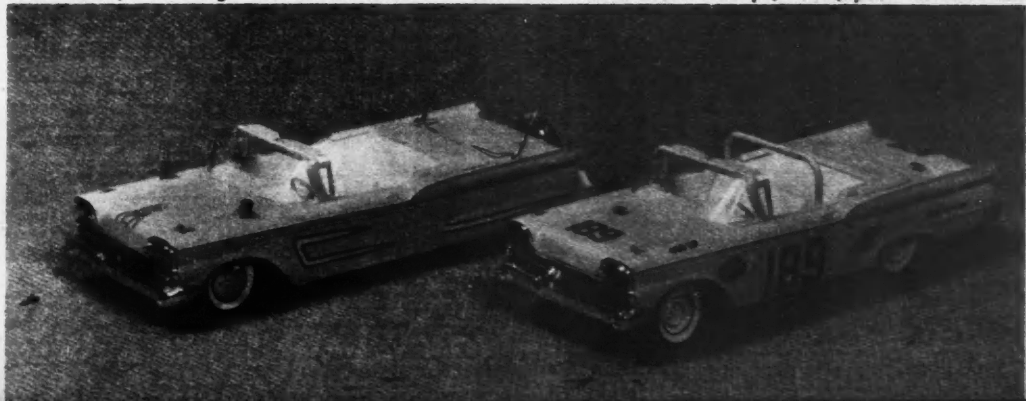


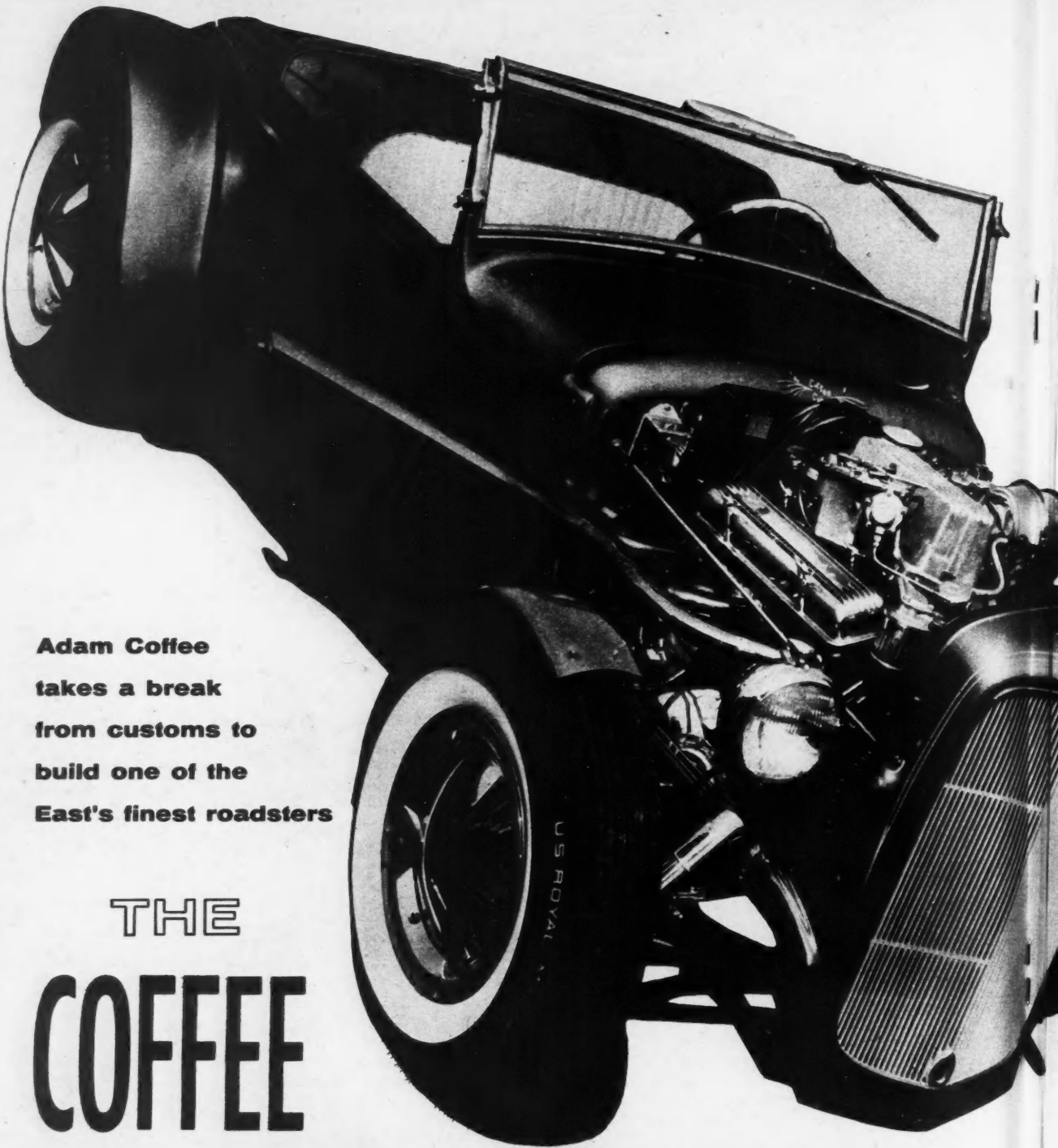
Moon discs, side pipes, louvers, antennas, are among items found in kits. George Barris was consultant for Revell kits.



Side pipes, painted silver, are easily attached to AMT's '59 Ford convertible. Note scallops, skirts, plain Moon discs.

Completed models illustrate two versions of AMT '59 Ford kit. Model at left is custom, one at right is stock car racer.





**Adam Coffee
takes a break
from customs to
build one of the
East's finest roadsters**

**THE
COFFEE
GRINDER**

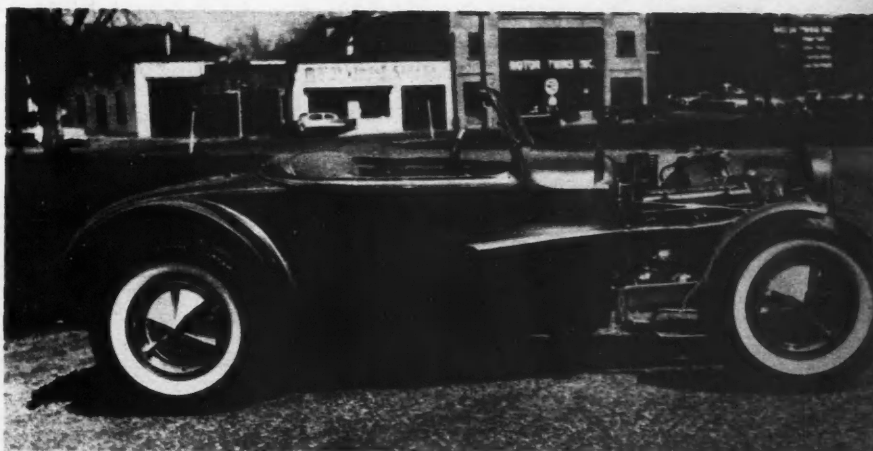
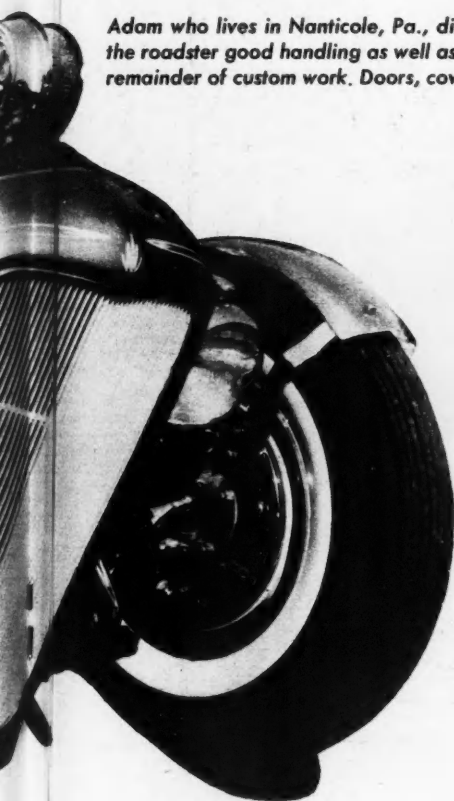


The fact that Adam Coffee's beautiful '30 Ford Roadster has won 15 firsts in 20 car shows is proof enough that the three years spent in building were well worth it.



Blue and white Naugahyde, pleat/roll fashion, was done by Ricardo's. Special dash panel with SW and Ford gauges is mounted on pleated covering. Furry floor rug is intended for auto shows.

Adam who lives in Nanticoke, Pa., did the 7" channel job and Z'd frame, giving the roadster good handling as well as looks. Custom Garage, also in Pa., handled remainder of custom work. Doors, cowling, deuce shell are filled for smooth look.



Extremely nice rear fender treatment utilizes Model A fenders which are trimmed, raised, and frenched to the body. Front fenders are made from Continental spare tire covers.

Photos by Woody Higgins

283 cubic inch Chevy is fuel injected, runs Dutoy cam. Weber flywheel and Auburn clutch are teamed with '39 Ford transmission to transmit power. Wild headers are handmade.



WILHELM'S CUSTOM SHOP RESTYLES THE '36 FORD

HAVE YOU EVER WONDERED what could be accomplished by adapting the latest customizing ideas to an early model car? We did.

To answer our question, we contacted Joe Wilhelm of Wilhelm's Custom Shop of San Jose, California to present his ideas on the 'late to early' restyle. Wilhelm chose the '36 Ford coupe as a basis for his custom ideas, modifying the Ford within a budget of \$1000.

BODY MODIFICATIONS

By far the most drastic feature on the '36 is the body channeling. Though this is not considered late model restyling, it was a very necessary change according to Wilhelm. The body was dropped over the frame a full eight inches; fenders were raised to their new mountings with new radiused openings. Due to the low height, running boards were not needed, so they were discarded and the mounting holes filled-in. The majority of the chrome trim was removed and holes filled during the channeling process.

FRONTAL CHANGES

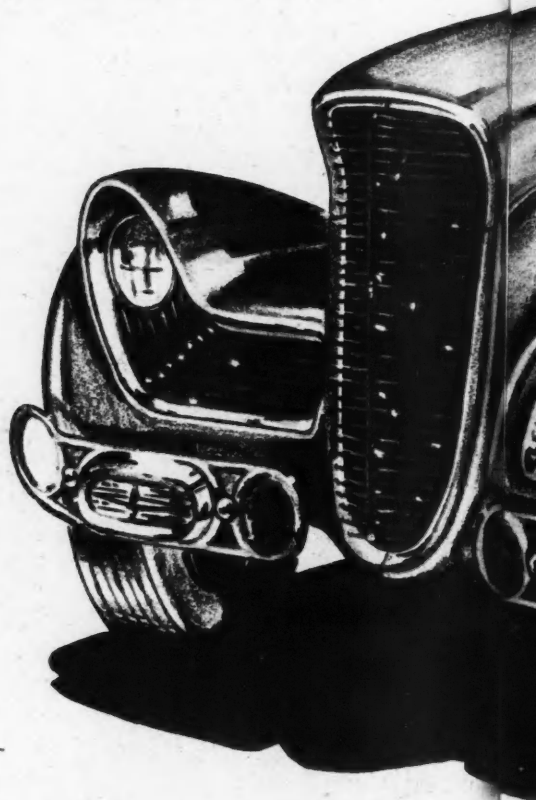
The '36 possesses a peculiarly shaped grille. Replacing this with another grille is a difficult chore, but with the introduction of the '58 Edsel, a perfect replacement was found. On our Ford, Joe molded the Edsel shell sans grille to the front. This called for reshaping the side and hood panels. To accomplish this, Wilhelm replaced them with special-built aluminum panels.

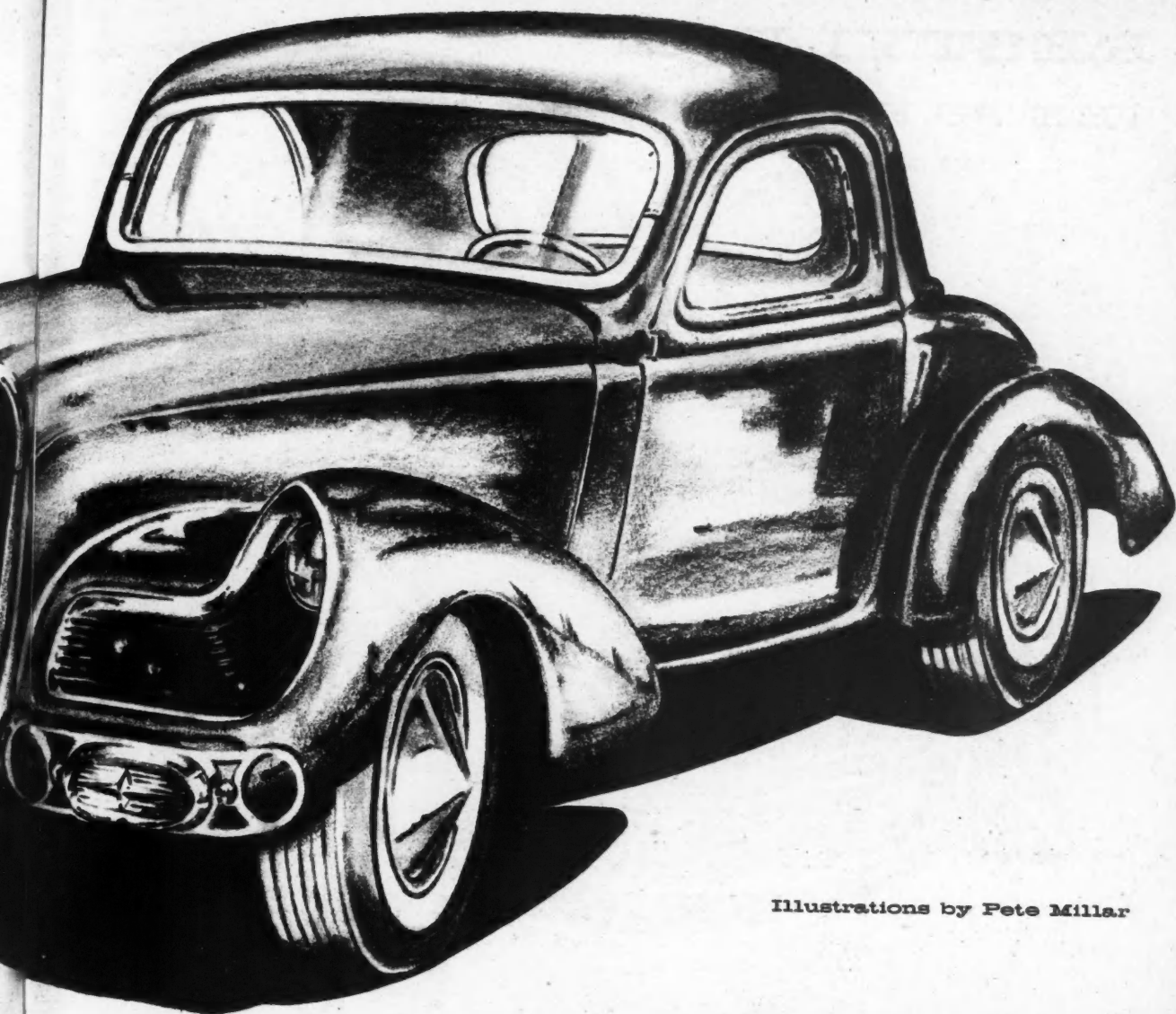
Joe utilized round rod for construction of the new grille. The rod was installed in a horizontal position, with one center bar lending peaked effect.

Headlights were completely changed. Basis for the new assembly comes from a '59 Lincoln. The Lincoln lights are deeply tunneled in the fenders, with a hood constructed over them. Leading to this installation is a special air scoop which is cut into the fenders containing similar grille work as found decorating the center Edsel innovation. Nerf bars were added to the front, with parking lights from a '58 Pontiac used for additional appeal.

REAR ASPECT

To enhance the raised rear fenders, Wilhelm rolled a special rear pan for the Ford using partial panel sections from a '54 Nash hood. If desired, the pan could be louvered before installa-

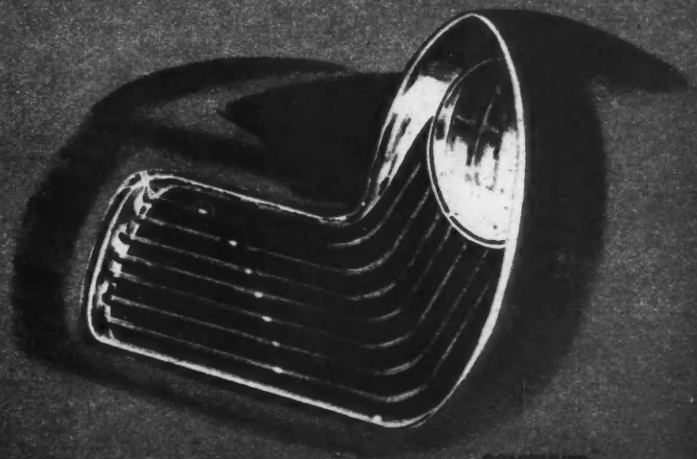




Illustrations by Pete Millar

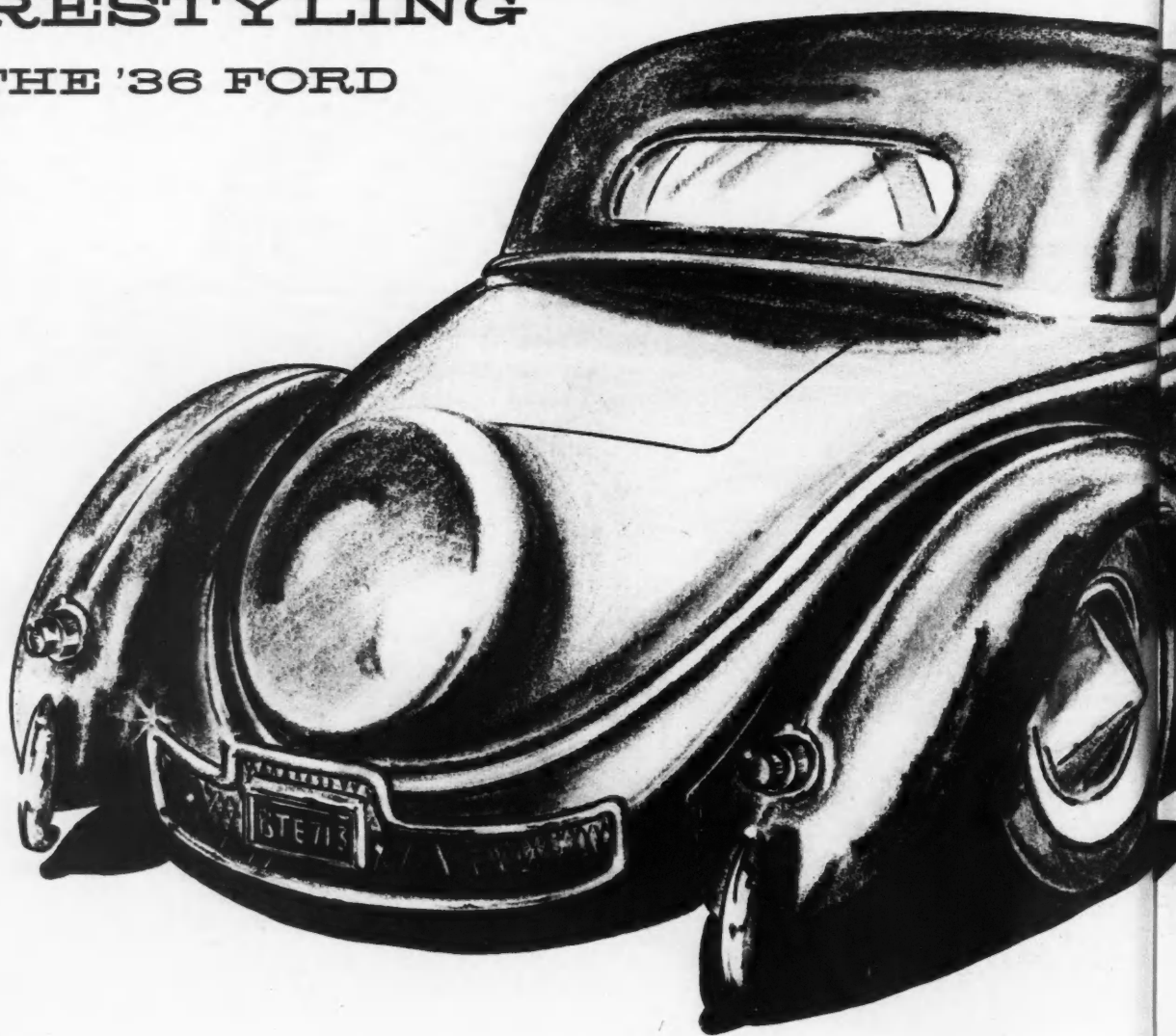


Joe Wilhelm



RESTYLING

THE '36 FORD



tion. A curved nerf bar was built to protect the rear. It has a mesh screen insert, on which is mounted the license plate. The continental kit is pirated from a '59 Plymouth Fury and is molded to the deck.

Striving for a definitely different idea for the taillights, Wilhelm discovered a very simple, but clever idea: telescoping four-inch tubing

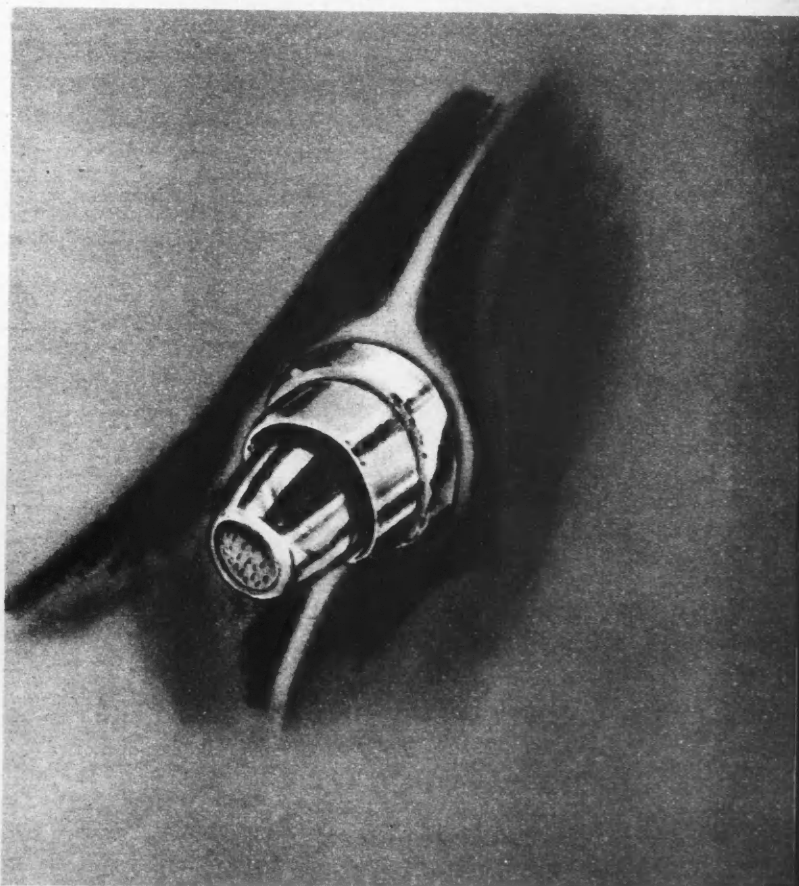
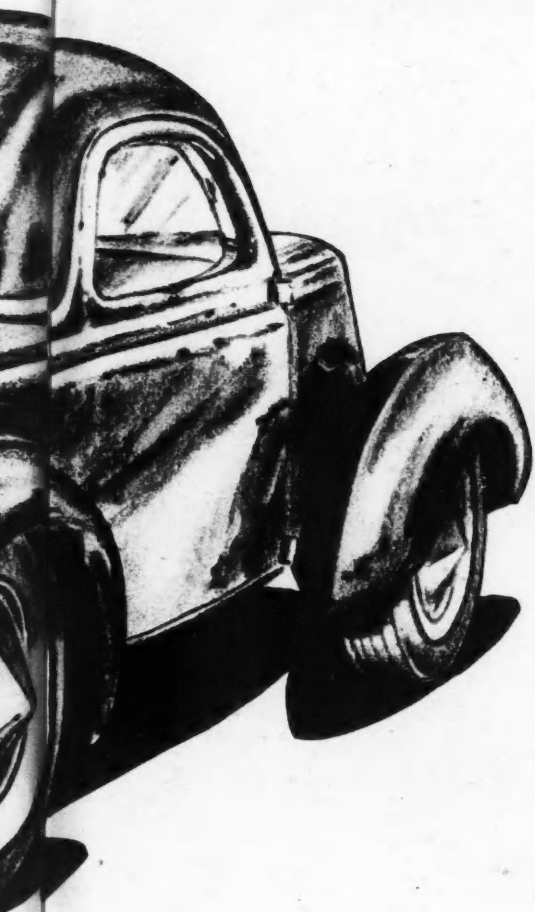
into the fender. In the center of the tubing, a spear from the '58 Mercury taillamp is installed, with the tip protruding about two inches out of the opening. A small bumper guard is added to the lower tip of each fender as a semi-nerf bar.

DETAILS

Due to extensive modifications, Wilhelm chose to paint the Ford with

'58 Buick Silver Mist color.

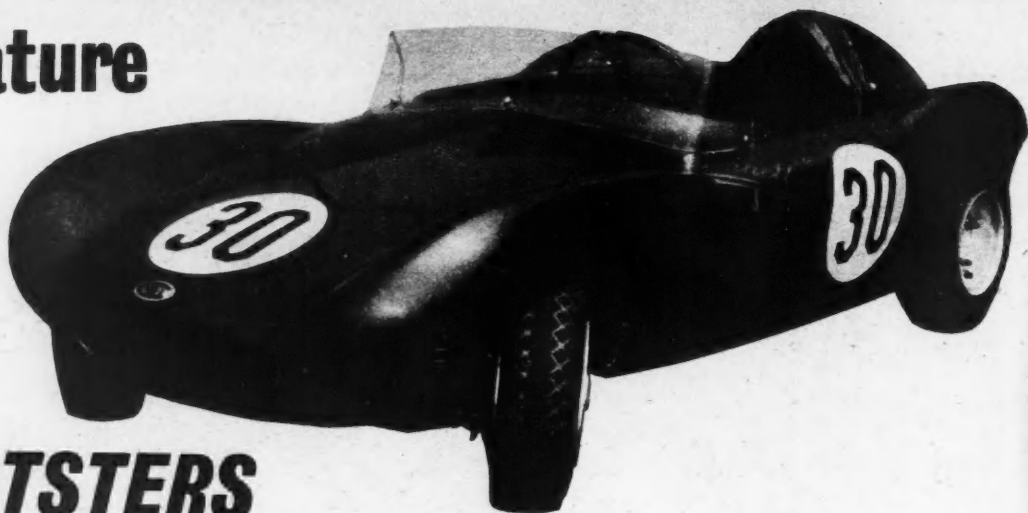
Many feel that the '36 Ford coupe is the first break between the early model street coupes or rods, and the custom cars as we know them today. Joe Wilhelm's modified '36 Ford is proof enough that the early automobiles can be given a one-of-a-kind appearance utilizing latest restyling ideas.



PRICE LIST

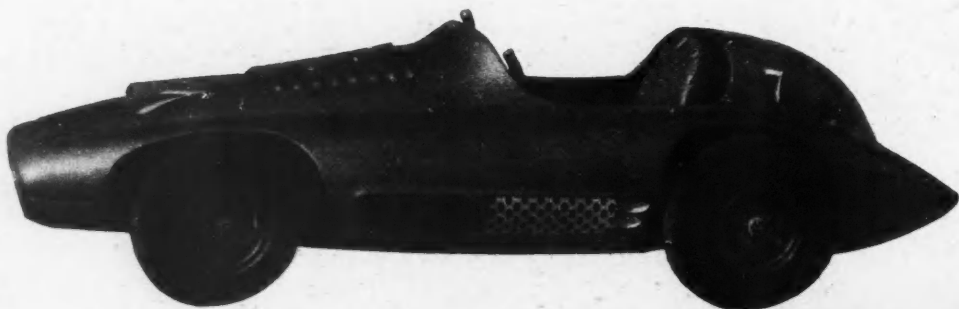
| | Parts | Labor |
|--|-----------|----------|
| Channel body | | \$100.00 |
| Reposition fenders and modify | \$ 30.00 | 200.00 |
| Edsel Shell | 20.00 | 60.00 |
| Special grilles | | 35.00 |
| Headlamps | 30.00 | 100.00 |
| Taillamps | 20.00 | 35.00 |
| Rear belly pan | 20.00 | 35.00 |
| Neck bars | | 80.00 |
| Paint job — 58 Buick silver mist paint | | 115.00 |
| | \$ 120.00 | \$880.00 |
| | 880.00 | |
| TOTAL | \$1000.00 | |

miniature



SPORTSTERS

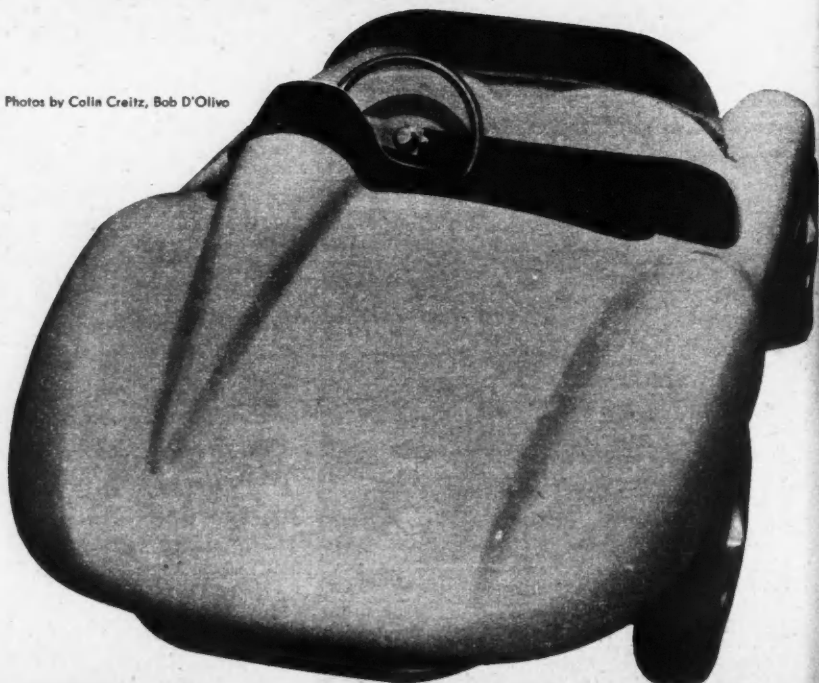
Sleek pint-size sports cars point to full-size fun and competition



MINIATURE VEHICLES, designed primarily for fun, are currently enjoying a high peak of popularity. One of the latest additions to join the market of the quarter and half midgets, go carts, and cycles is the new line of midget sports cars.

Large cockpit areas permit all members of the family to enjoy the sheer fun of driving these small sportsters. Powered by Continental, Briggs & Stratton or Clinton engines, the sleek little cars are available in a number of optional engine, chassis, and body combinations. Competition classes are currently being formed to increase the scope of the miniature sports cars. At presstime, a group of Southern California adults are already actively engaged in weekly races indicating the growing interest in these cars.

Photos by Collin Creitz, Bob D'Olive

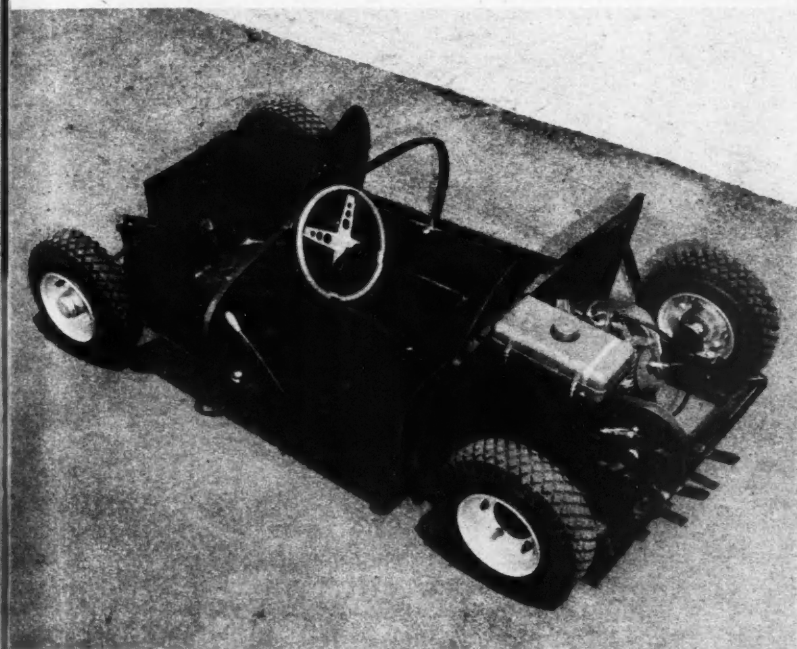


CAR CRAFT

CONNETTI MONZA — basically a cart with grand prix styling



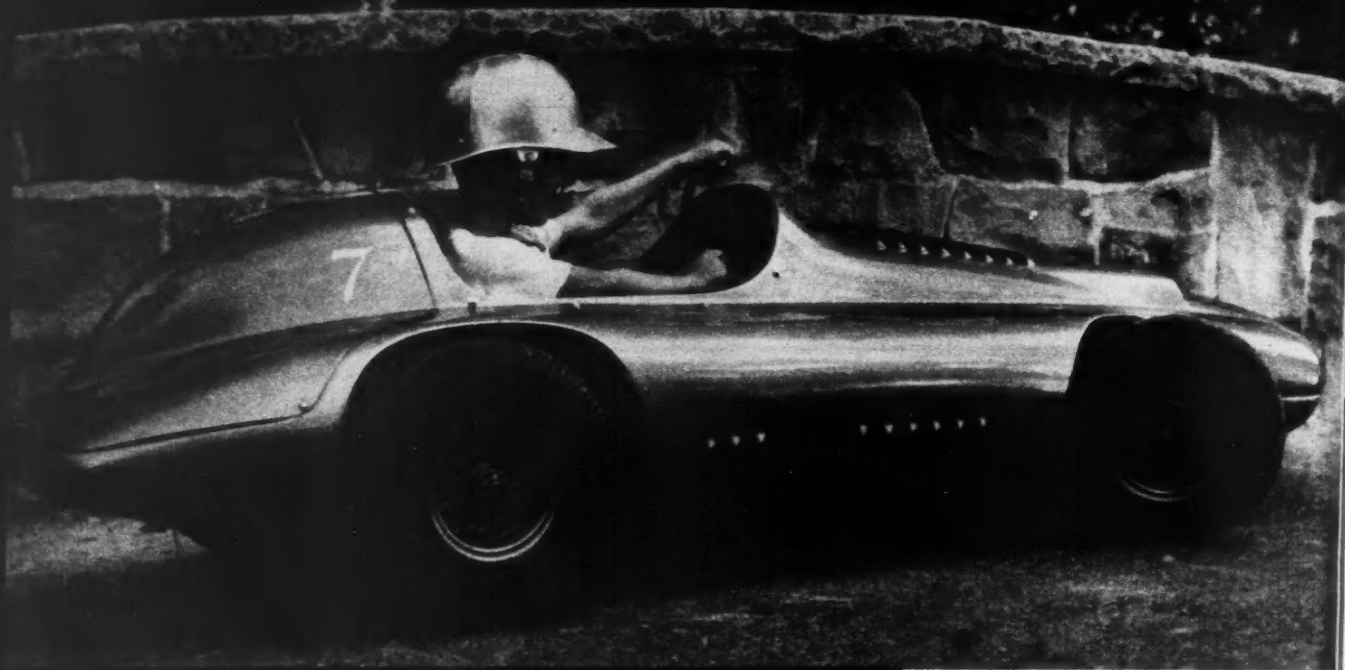
Sleek body shell of the Connetti Monza is styled in traditional Italian competition flavor. Fiberglass body has removable rear panel for immediate access to engine. Interior is upholstered in padded Naugahyde for comfort. On-off toggle switch is mounted on dash in easy reach. Up forward is a Ferrari-type grille; six color combinations are available for Monza.



Chassis sans body reveals solid square tubing frame with forward/aft bulkheads for support. Brake lever operates internal expanding unit. Wheelbase is 47", tread 30", overall height with body 21 1/2" for 170 lb. sportster. For info: Charcon Inc., 7137-cc Laurel Canyon, Hollywood, Calif.

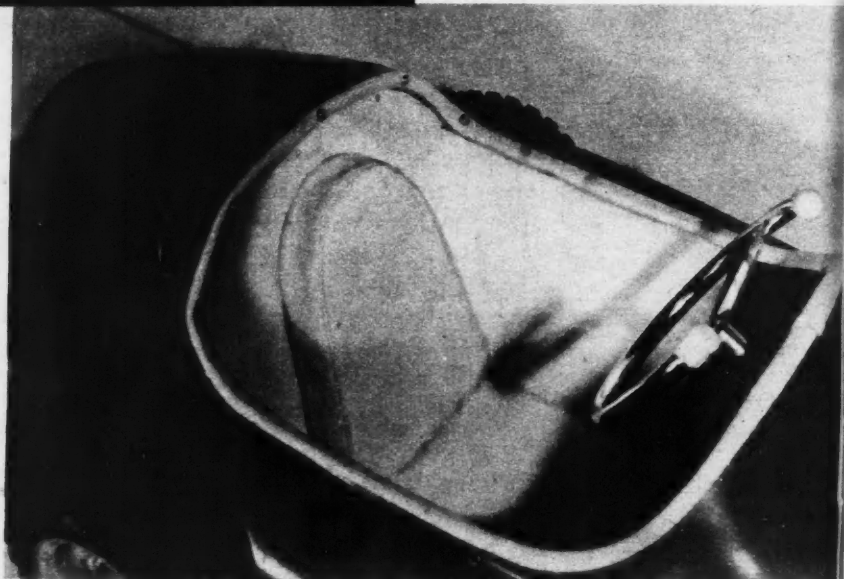
Continental 3-h.p. engine comes with Monza, however optional conversions are available. Final drive ratio via chain is 7.25-1. Rear axle has self-aligning ball bearings. Front end features direct steering, adjustable rods and aircraft ball joints. Swing axles are independently coil sprung.



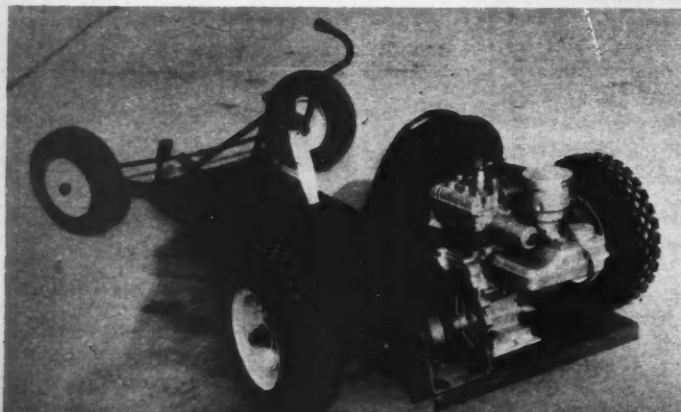


SPINSTER URCHIN — *race equipped speedster for family fun*

One of many frame/body/engine variations is this Spinster Urchin chassis with Sportster Grand Prix-type body. Constructed of fiberglass, the shell has optional louver panels installed, plus airscoop. Body panels are reinforced with laminated strengthening supports. Direct all inquiries to: Spinster Corp., 22473-cc Cora St., Farmington, Mich.



Cockpit area is fitted with Naugahyde covered seat cushion and liner. Steering wheel is optional; can be ordered in half or full circle. Direct linkage is standard, but rack and pinion can be installed. Note indentation in body for rear wheel and tire.

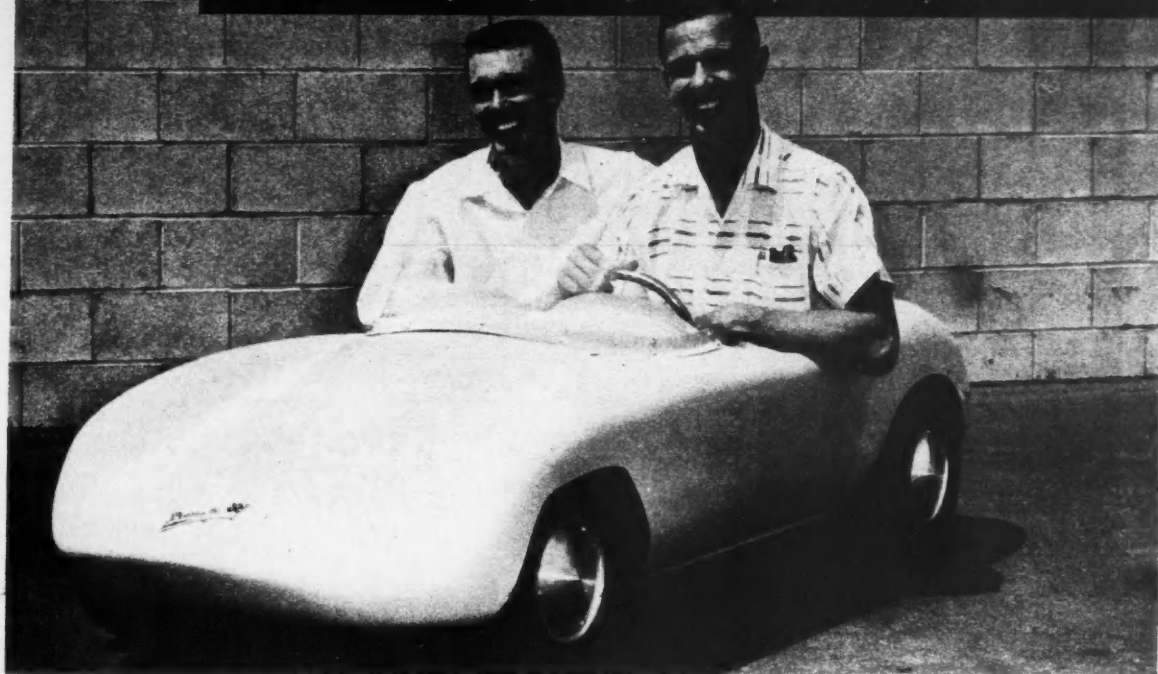


Modified cart chassis is of tubular construction; side rails act as braces. Briggs & Stratton engine is mounted behind rear axle, uses jack-shaft drive arrangement. Low center of gravity achieved with this method of engine mounting. Note full belly pan.

CAR CRAFT

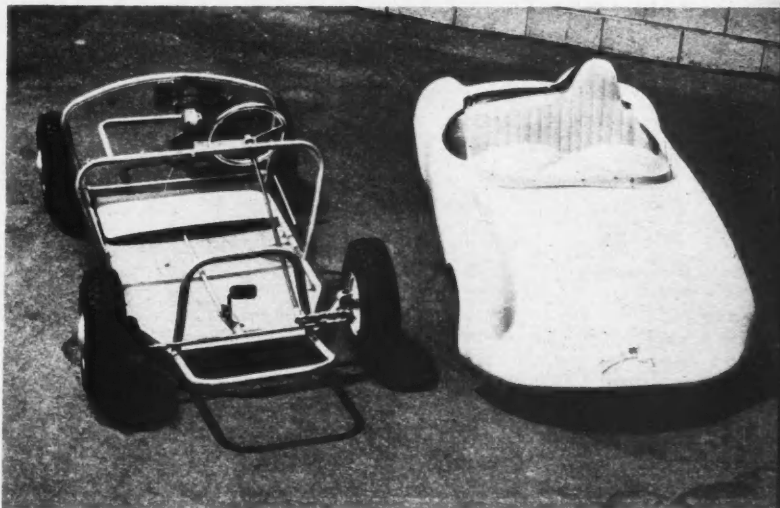
DEVIN JUNIOR — *two passenger design*

for dad and junior

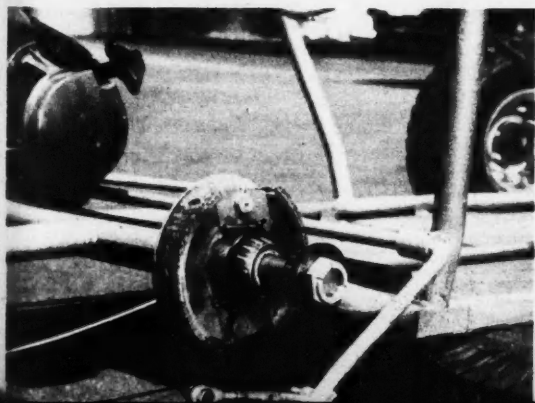


Sportster with 50" wheelbase and 31" tread permits occupancy of two adults in upholstered cockpit. Fiberglass body is envelope-style, can be ordered in various colors. Four different versions of the Devin Jr. offered, based mainly upon engine variations from stock to full race.

Five minutes time and removal of nine bolts is all that it takes to detach body. Frame is Heliarc welded tubular steel. Note belly pan.



ABOVE. LEFT. Drag link steering is employed. Tie rods are adjustable. Wheels are 6" diameter, mount 14" knobby tires. For information, write: Small Car Engineering, 2463-cc Chico Ave., El Monte, Calif.



Hand lever, mounted left side of chassis, actuates internal expanding two-shoe brakes on rear wheels. Note Timken tapered roller bearings.

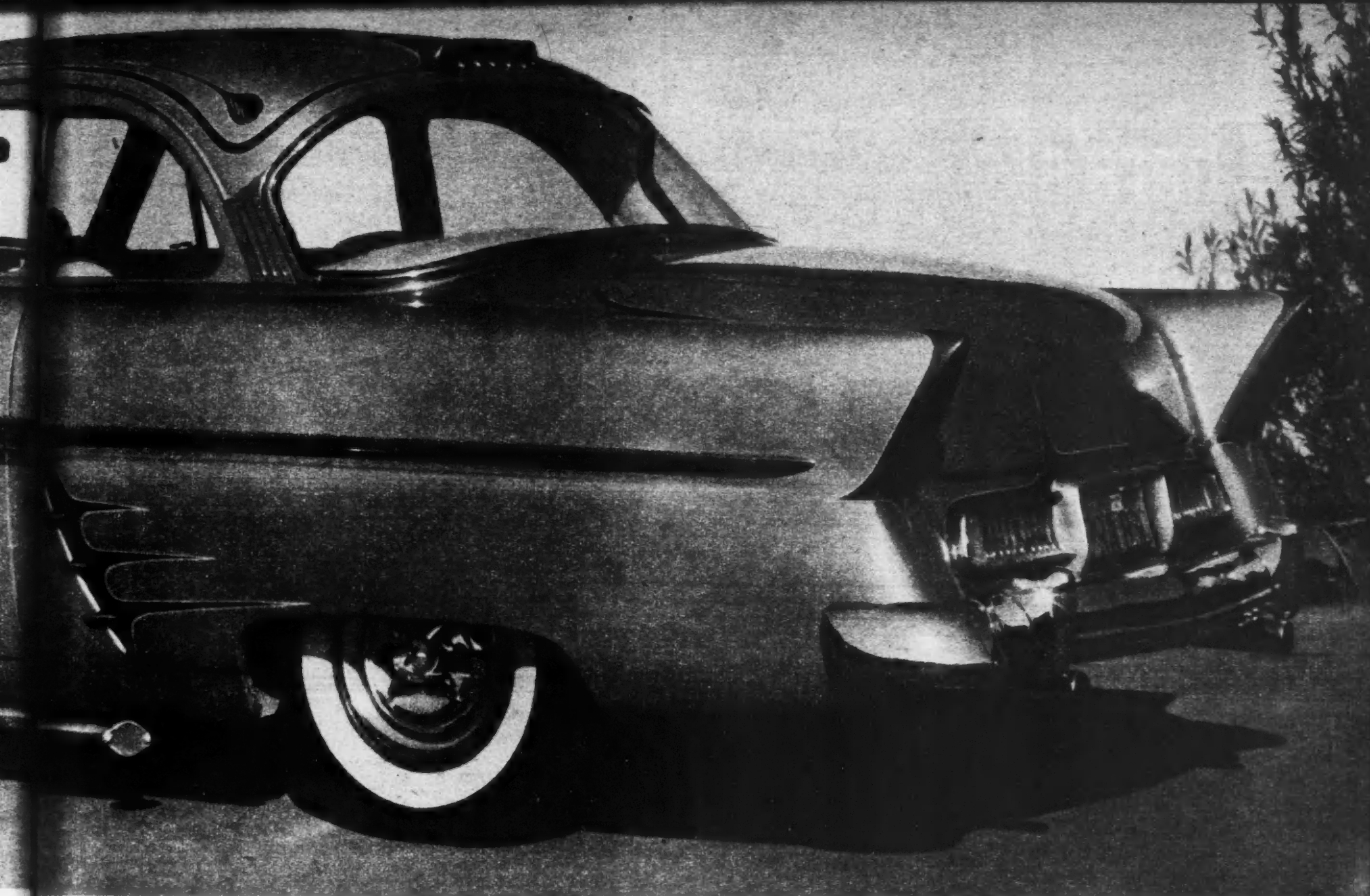
CUSTOM

ROYAL



Photos by George Barris





Pride and joy of Irvington, California is Jerry Furtado's fine '53 Ford coupe. Owning a shop, J. Bee's Auto Body, enabled Furtado to perform work himself in six months time. Silver metallic lacquer is graced by conservative Royal Blue scallops.

Furtado employed canted quad headlights, assembly from '58 Chev Impala, and tubular grille in molded shell for disguised front. Reworked hood has rounded corners, no trim.

Grille assembly from '59 Mercury is installed on lower deck panel, borders molded '49 Chev license bracket. '54 Ford station wagon bumper guards used on front, rear bumpers.

BELOW, LEFT • Fenders were extended and angled to aid installing of '57 Lincoln taillight lenses. Round rod was used to french lights to fenders. White striping outlines scallops.

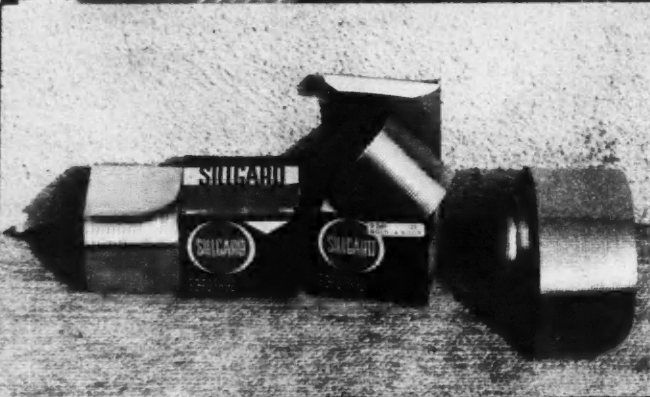
Furtado reports that toughest job was top scoop. Rear glass and white Naugahyde headliner were removed to complete chore. Hand formed, scoop uses '54 Merc teeth for accent.



here's
how:



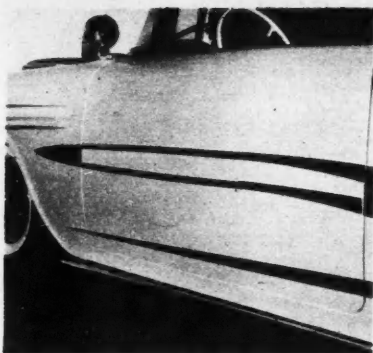
"MYLAR"
custom tape —
a new decor
for any
custom car



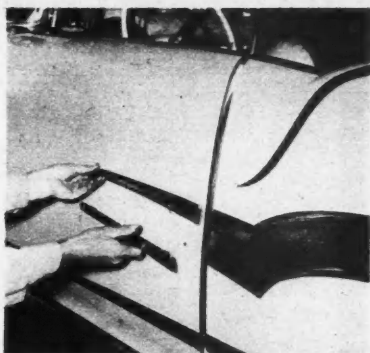
Photos by George Barritt

CUSTOMIZING WITH TAPE? Sounds strange, but more and more custom car owners are finding that much can be done with this versatile material. The metal-like backing on the Mylar Custom Trim Tape is the main reason behind the trend toward using tape for decorative purposes on an automobile. The tape gives a similar appearance to the anodized metals being used on many of the new cars. It is a pressure-sensitive tape and is much easier to work with than metals. Not only is it decorative but it is protective as well. Silguards, door handle guards, etc., may be purchased in kits which are cut to fit specific cars. The tape is also available in rolls from $\frac{3}{8}$ " to very large sheets. Checkered, striped, and many other designs are pressed into the tape itself, making for a variety of effects which may be obtained in an installation. The following step-by-step story shows the simple method for installing the tape between side trim strips, simulating late model styling. The tape is available at most automotive, accessory and hardware stores, or may be obtained by writing: Sutone Corp., 3001 East 12th St., Los Angeles, California.





1. Area between the two chrome strips is section to be filled with the tape.



2. First step is to remove the trim from the door and from the fender panels.



3. Measure length of the section to be covered with tape. Allow some excess.



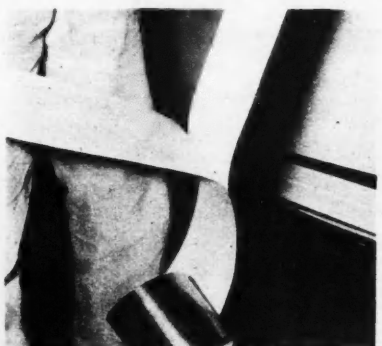
4. Transfer this measurement to the large roll of Mylar tape and mark off.



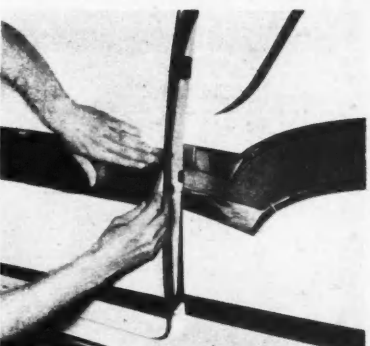
5. Place the chrome trim strips on the tape in mounting position and mark.



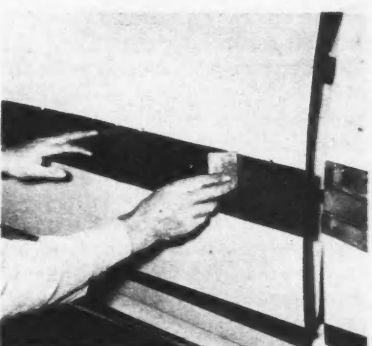
6. Use scissors or tin snips to cut pattern from the tape. Follow the lines closely.



7. After pattern is cut out, remove the paper backing from the Mylar tape.



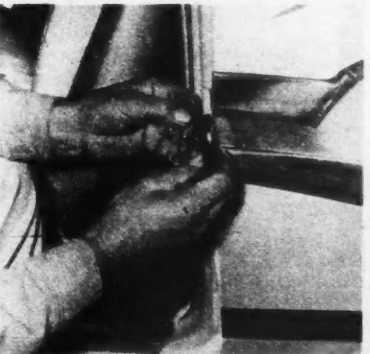
8. Install tape in position on the body panel. Warm panel gives best results.



9. Use a squeegee or stiff cardboard to press the tape firmly to the panel.



10. Ream out mounting holes where the tape has overlapped with a punch.



11. Ends of the Mylar tape should be curved back, trimmed with razor blade.



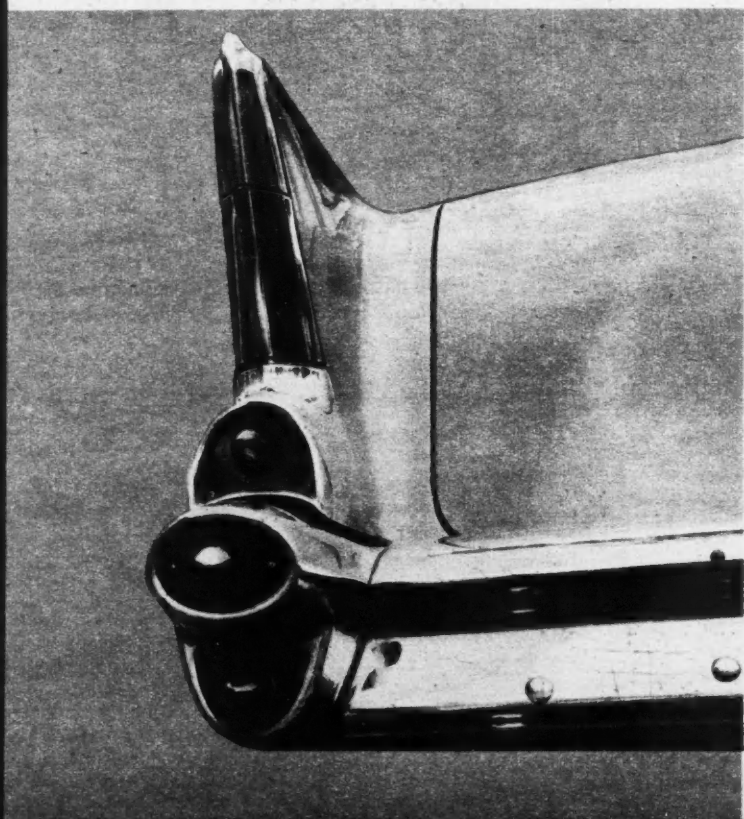
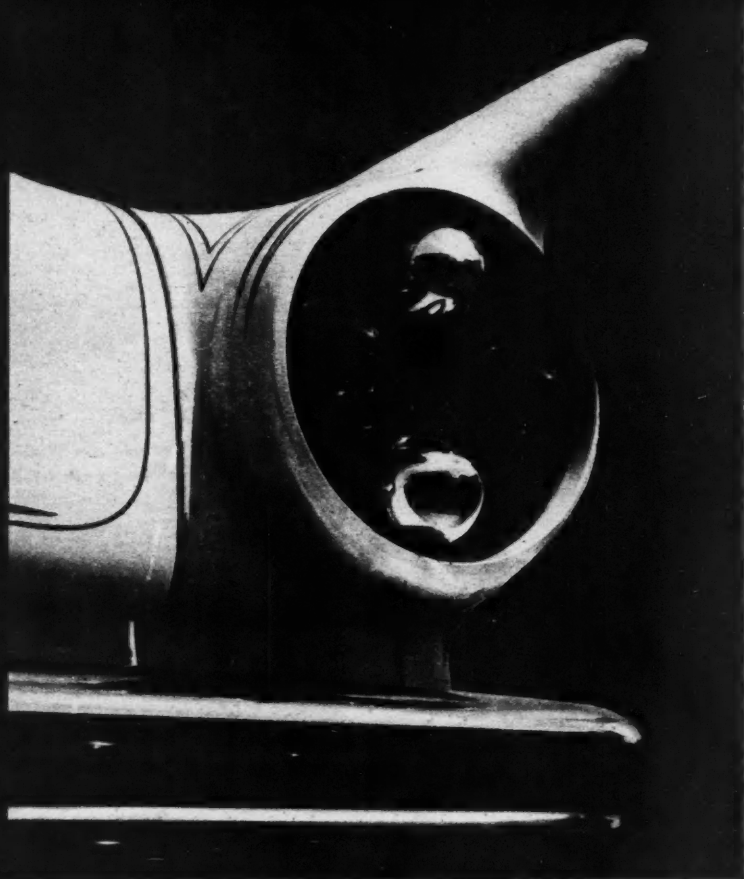
12. Here are two of the designs available in $\frac{3}{4}$ " tape for other restyling.

here's
how:

**SPECIAL PLASTIC LENSES
FOR THE '57 FORD
AND CHEVROLET —
A MERE THIRTY
MINUTE BOLT-ON JOB**

Photos by Brollier, Creitz

RESTYLED TAILLIGHTS without torch work is not only the easiest but the least expensive way to give your car a custom look. However, too often, taillights cannot be found that will fit a car without some metal work. Owners of '57 Fords or Chevrolets no longer have to worry about this. Roth Studios has recently introduced molded plastic taillights for these cars. The "Ford Excalibers" are offered in two styles, one with two molded plastic bullets and two chrome bullets, and the other with four plastic bullets. The "Crimson Lancers" for the Chevys are three separate lenses, each with a molded plastic bullet. One lens replaces the stock unit, while the other two are to mount on the bumper, as seen in the photo at right. On the Chevy installation the lights can be made functional by cutting into the bumper and installing accessory light buckets behind the lenses. In states where reflective backing is required on taillights, it should be added to the lenses before installing. Price for the Ford lenses is \$12.95 per pair. \$14.95 for the six Chevy lenses. They are available from Roth Studios, 4616 Slauson, Maywood, California.

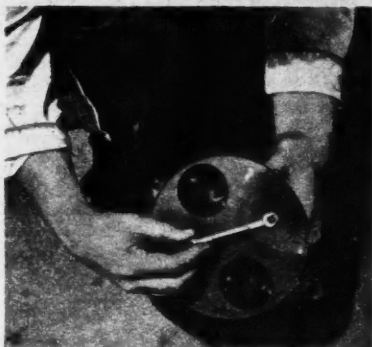




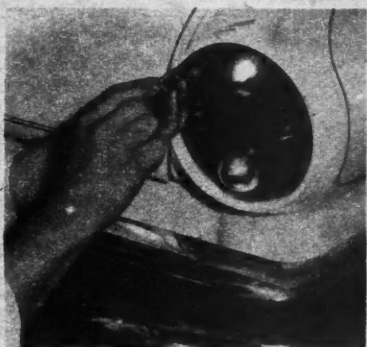
1. First step is to remove the stock tail-light lens from the light bucket housing.



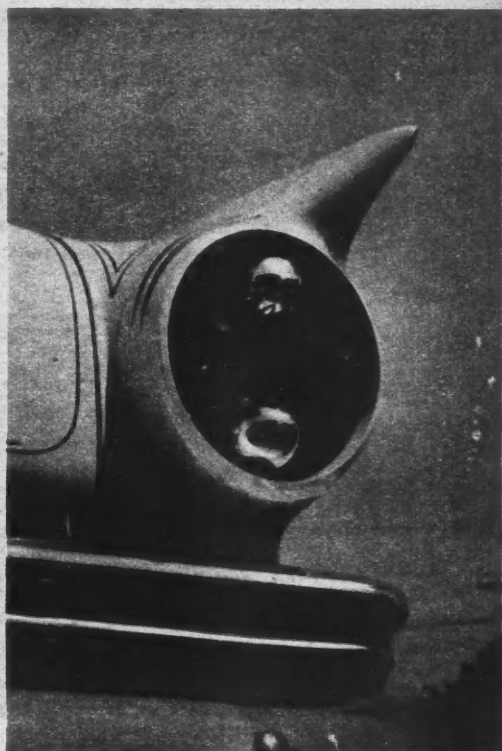
2. Hold bullets in position on the new lens, mark points that must be drilled.



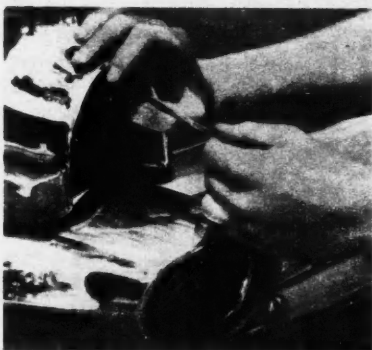
3. Drill holes to size of the attaching bolts, secure bullets to the new lens.



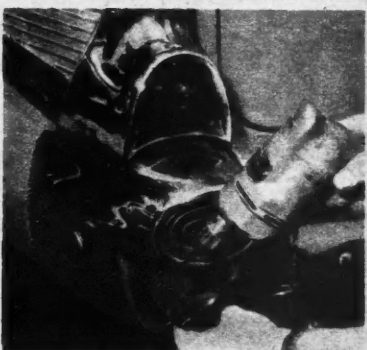
4. Drill holes in lens to align with the stock mounting holes, install the lens.



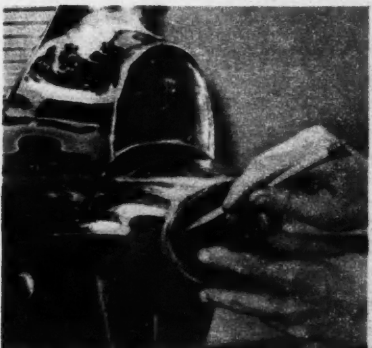
5. Lens can be mounted as shown here, or turned 90° for a different effect.



1. Remove the stock lens; use it as a pattern for drilling attachment holes.



2. Next, holes are drilled in each of the new lenses. Drill to the screw size.



3. Hold each lens in position, mark, then drill required holes in housing.

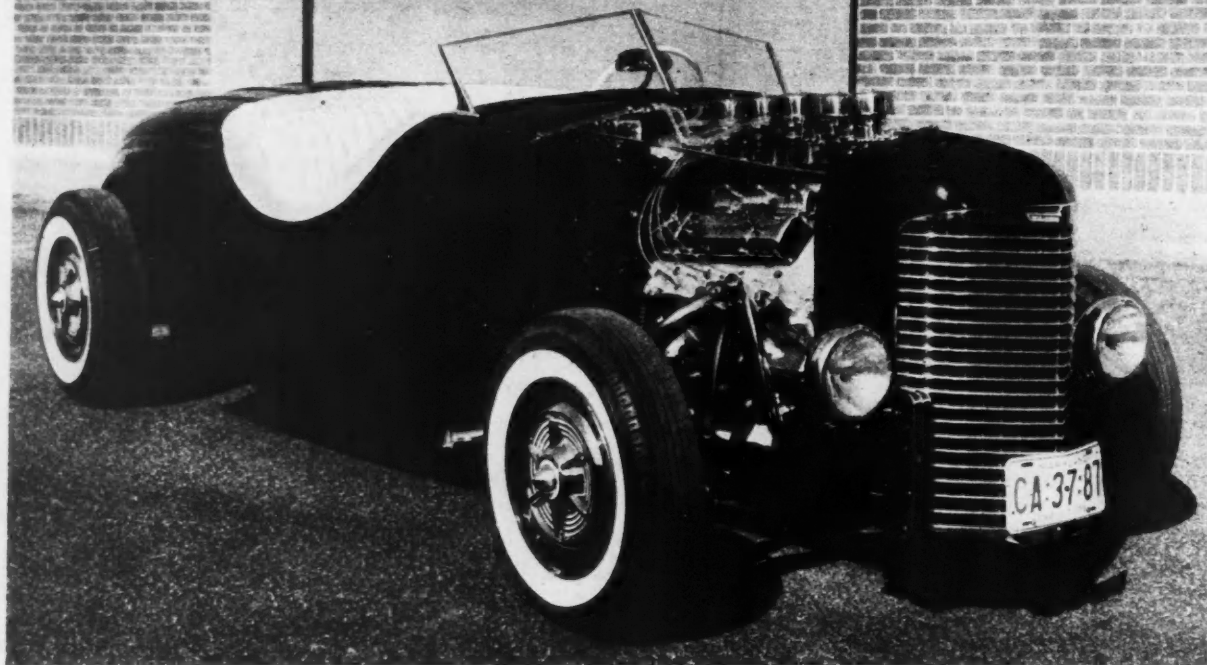


4. Secure each lens in place on tail-light housing. Metal screws are used.

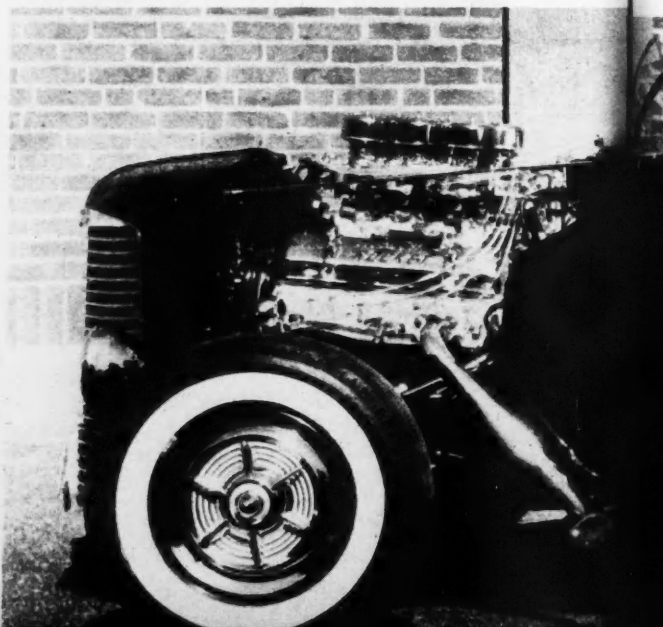


5. Trio of bullet taillights gives a novel appearance to the rear of the Chevy.

*Rare Ford roadster-
Olds power-are combined
in Earl Phillips' detailed-*

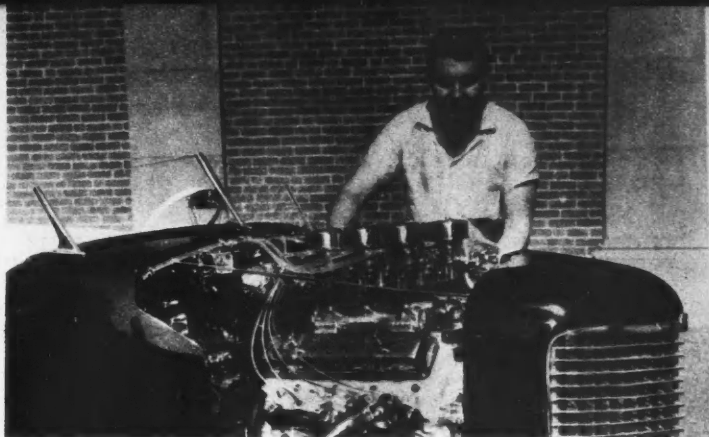


FORD-O-ROCKET

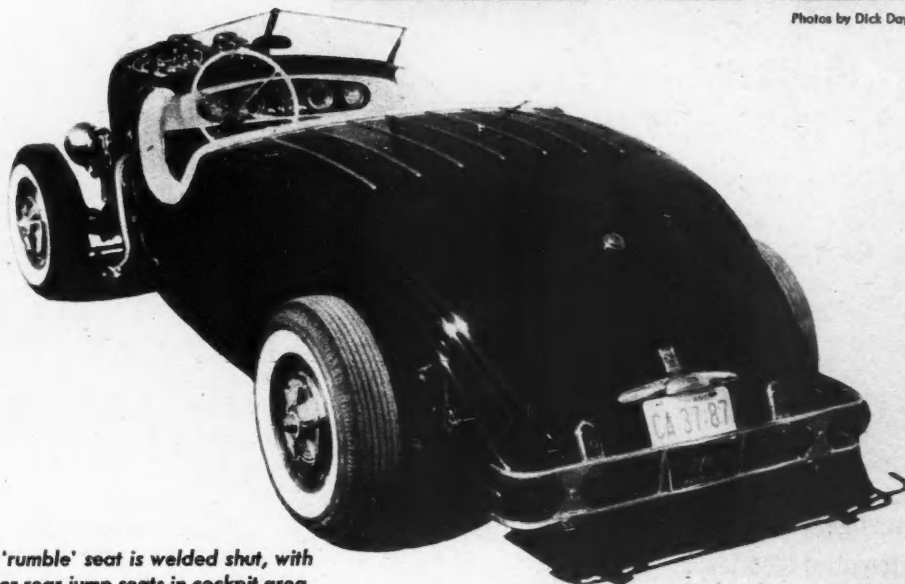


Earl Phillips of Baltimore, Maryland checks out powerful 383 cubic inch '57 Olds mill running lsy cam, Weiland 6-jug manifold, Jahns pistons, Mallory ignition. Power is transmitted by '37 Cad trans. Engine and firewall are spotless.

Massive '37 Cadillac Limousine grille is fitted to front of Phillips' '36 Ford roadster. Body is channeled 9". Doors are welded shut, cut-down to permit entry. Special windshield was made. Buzzy Jenkins aided owner in majority of work.



Photos by Dick Day



All body seams are filled, 'rumble' seat is welded shut, with panel extending over former rear jump seats in cockpit area. Nerf bar bumper protects '52 Chevrolet taillights. Note gas tank spout on deck. Phillips belongs to Challengers, Md.

Spotless white Naugahyde pleats and rolls cover cockpit area upholstered by Adler Mandel, Bethesda, Md. Handmade dash and late model steering wheel are unique. '40 Ford brakes, spindles, '48 Ford steering gear and Pontiac rear axle.



EXPERIMENTAL FUN



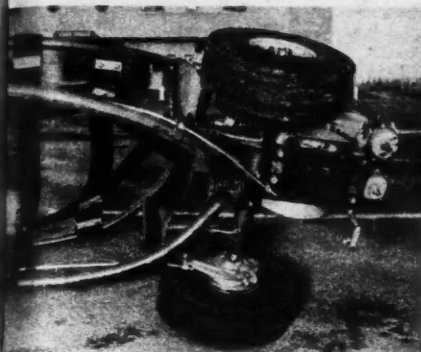
Investigation of automotive theories, plus a dash of fun, prompted Dick Wall to build this unique cart

Dick Wall, who resides in Portland, Oregon, built his cart to investigate some personal automotive ideas which would have been too costly to do on larger cars.



Tread width of 34 inches in front, 18 inches at rear is evident in photo at left. Car has cornering problems due to narrow rear tread, will be widened in future.

CAR CRAFT



Dual carburetion feeds Clinton A400 engine. Schwinn bicycle brakes are fitted to rear wheel. Note frame taper.



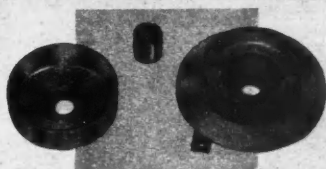
Photos by Bud Long



Dick says the contoured webbing seat makes for extremely comfortable ride.

SEPTEMBER, 1959

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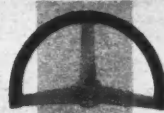
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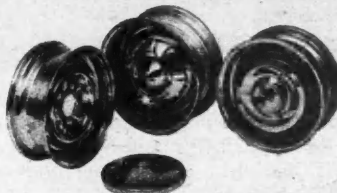
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1959 FORD



1958 FORD & Thunderbird



1957 FORD



55-56 FORD



1952 FORD

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1959 CHEVROLET



1958 CHEVROLET



1957 CHEVROLET



1956 CHEVROLET



1955 CHEVROLET

QM'S BIG FIVE MILLER



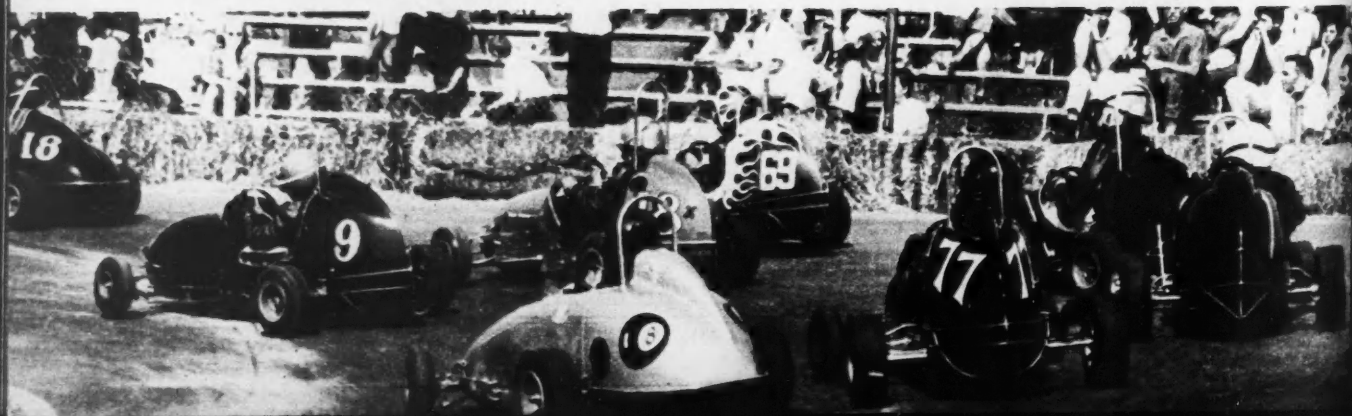
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Nine year old Dean Lowe (left) and big brother Jack (right) driving twin Kurtis-Crafts kept things strictly a family affair recently both winning 100 lap main events for their respective "B" Modified and "Fuel" divisions at Los Alamitos' Second Annual "Five Miler." Twelve car fields employed both relief drivers and two mandatory pit stops to highlight the day's once-a-year activity. Pits were cleared of all non-participants and cars facilitating a free pit area for rapid re-fueling and change of drivers. Needless to say, the event was an eventful one for all.



A string of California's best tour banked corner of Los Alamitos' asphalt track. Out of twelve starters, eight cars finished.



John Fredrickson and crew are caught by Car Craft's camera during pit stop.



As John steps from dead-engine car, after running first few laps, relief...



driver, Doug Lindow, jumps in cockpit as stalwarts re-fuel car and check...



out engine compartment, quick snap of seat belt, replacement of the...



tail piece, Doug is quickly pushed to a good start, returns to track in style!

1/4 & 1/2 MIDGET ENGINES

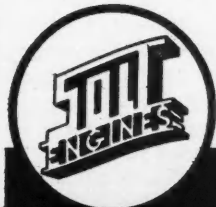
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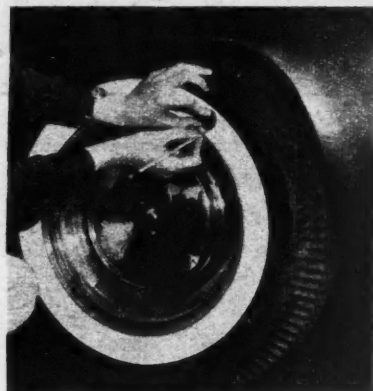
CONSTANTLY ON THE vigil for new restyle products, timely customizers are jumping on the bandwagon for Dot-O-Wol tire patches. Latest in tire glamorizing, these circular rubber spots are available in two different colors: white for black-wall tires, black for whitewall tires.

Cement, which bonds the patch to the tire permanently, abrasive tool, and complete instructions for applications are included in the kit. The only other items required are a pencil and compass or divider. Dot-O-Wol tire kits are available at local auto accessory stores, or write direct to manufacturer: Dot-O-Wol, Dept.-cc, 1126 S.W. Morrison, Portland, Ore.

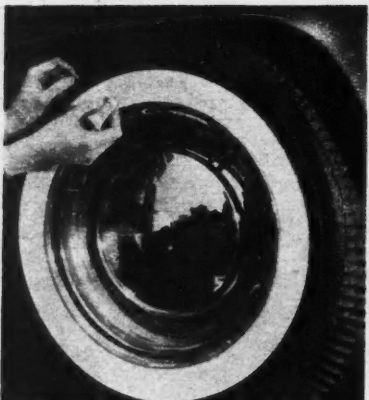
Photos by Al Palocz



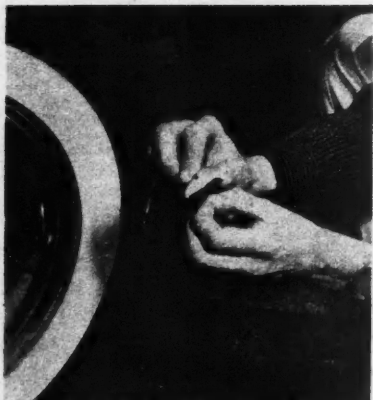
Using dividers, measure wheel radius. Transcribe to tire, make equal spaces.



Hold Dot-O-Wol to tire at marked spots, use a pencil to outline shape and size.

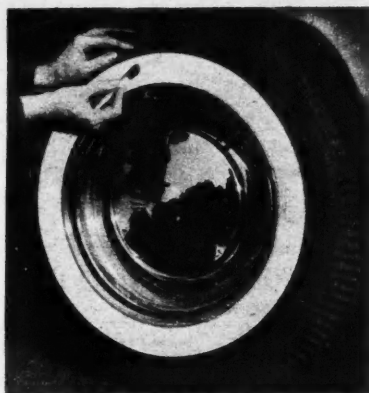
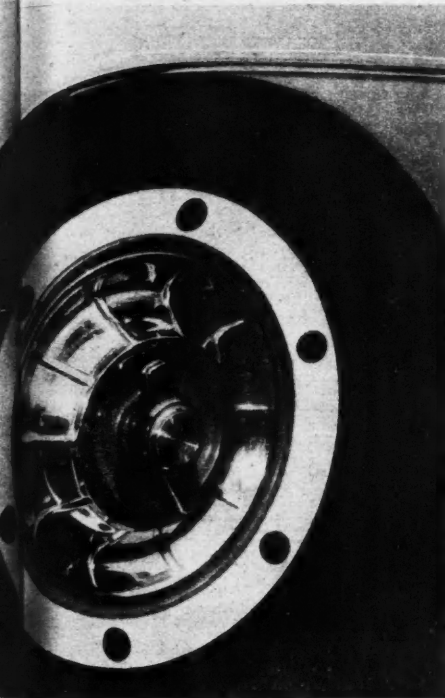


Apply the cement (supplied in kit) to tire where Dot-O-Wol will be added.



Paper protects adhesive substance on Dot-O-Wol. Remove same as tire patch.

CAR CRAFT



Use abrasive tool in kit to roughen the surface where Dot-O-Wol is placed.



Apply Dot-O-Wol on prepared area. Adhesive and patch will bond together.

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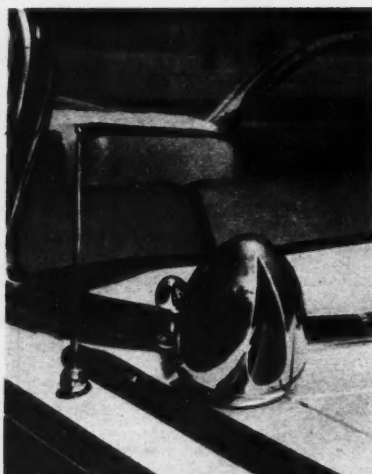
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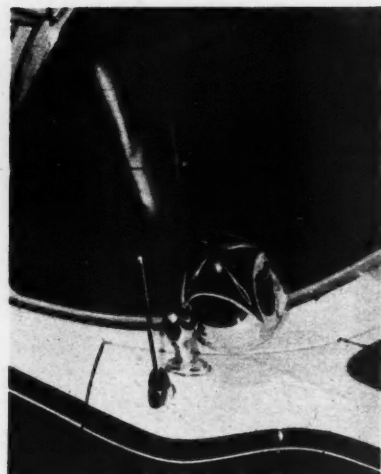


ON SPOTLIGHTS

Designs in color chrome and striping draw attention to custom spots



Tear-drop design in color chrome is a popular item at present. Note striping.

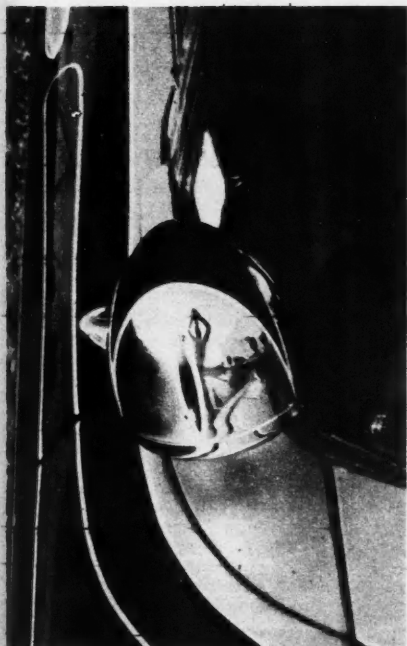


More elaborate design is seen here on spotlight covered with color chrome.



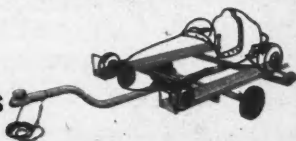
Unique styling has color chrome starting at front, diminishing to a point.

Simple but effective, three point design also features a small tear-drop.



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"DO YOU THINK YOUR MIDGET IS SAFE?"

It is a strange, but pathetic situation that so many people must learn of precautionary safety requirements through the misfortune of others. This has been the case with quarter midget activity from time to time—and once again the misfortune of others has broken thru to remind every enthusiast that his miniature car is *not quite as safe as he might imagine!* Only recently young Bobby Olivero, known to quarter midget enthusiasts the country over for his consistent display of experienced driving skill, was injured due to negligence on the part of many. The accident occurred when fire broke out in his small car while running it thru a few warm up laps before race time. Cause was traced to a loosened fuel line fitting, that had disconnected itself from the fuel tank, allowing the contents to spill into the rear engine

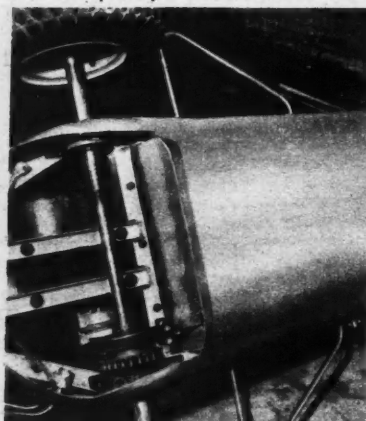
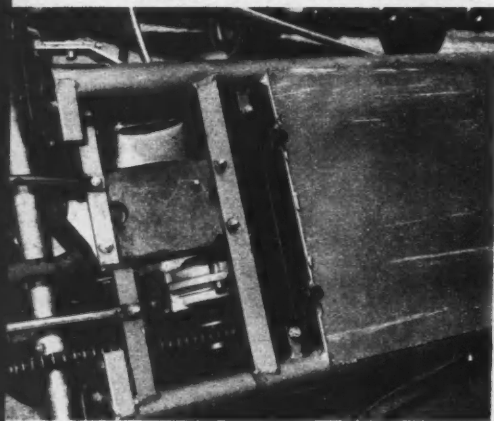
compartment. You must be reminded that this was the cause of the accident—but *not the contributing factor to the driver's injuries.* The contributing factors were a partial engine firewall and a full lower body pan (belly pan) that trapped the fuel content inside the car. Needless to say, as the fuel ignited and was carried forward in the fully enclosed belly pan due to the rake of the car, the complete car became enveloped in flames. Two basic precautions concerning the design of any car could have prevented injury in this type of accident—even if a condition did exist whereby the fuel line become disconnected from the fuel tank of the car. First, no car should be allowed to compete in any quarter midget activity if the lower body pan (belly pan) extends past the rear engine's firewall. Second, no car should be allowed to compete in any quarter midget activity if the engine's firewall does not extend to

the lower body pan entirely sealing off the engine compartment from the cockpit and other forward areas of the car. It is also recommended that the rear area of the car just below the engine compartment be completely left open as illustrated in the following photographs. An opening such as this is actually an escape hatch for all possible malfunctions in the engine room of any given car.

It is urged that every quarter and half midget association amend and enforce the following safety recommendations. (1) The engine compartment of any car shall possess an adequate metal firewall. This firewall whether the engine is mounted in the front or rear of the car, shall serve as a protective bulkhead completely sealing off the cockpit and driver's area. (2) The entire body area just below the engine compartment of any given car shall be open and unobstructed. (3) The lower body pan (belly pan) shall not extend under the engine compartment of any given car. And for those enthusiasts who are now participating with cars that possess full lower body pans and partially designed firewalls, we urge you to correct these features immediately as illustrated in the following photographs.

Many of the manufactured cars for both quarter/half midget activity already feature open lower engine compartments and sealed engine firewalls. Model below is well known Kurtis-Craft.

Photo below illustrates how all cars now possessing full lower body pans (belly pans) and partial firewalls should be modified. Cut the belly pan away and completely extend metal firewall.



Quarter Midget action—New England style, can be seen above as members of the Silver City 1/4 Midget Club hot lap it for CAR CRAFT camera. Meriden, Conn., association boasts some 60 cars.

TRACK LISTINGS

SAN FERNANDO, CALIFORNIA National Quarter Midgets Incorporated

TRACK: asphalt. RACE DATE: every Saturday evening and every second and fourth Sunday afternoon. QUALIFYING: Saturday starting at 5:30 P.M., Sunday starting at 11:30 A.M. RACING CLASSIFICATIONS: Saturday "run as you qualify system" prevails; Sunday races feature "Stock", "B Modified", "AA Fuel". GENERAL RULES AND REGULATIONS: all cars must be equipped with the following safety features: approved roll bars, safety seat belt, bumpers front and rear, one wheel brake, outside ignition switch, adequate metal firewall, all metal frame. DRIVER: approved crash helmet, unbreakable goggles, leather or other adequate

long sleeve protective apparel. ENGINE SPECIFICATIONS: "Stock"—7.5 cubic inches; following modifications to engine allowed—rod, gearbox, oil pump, ignition, carburetion, split-type keepers on valves as long as they remain stock size. "B Modified"—7.5 cubic inches; all modifications allowed except for alteration of stock camshaft. "AA Fuel"—8 cubic inches; all modifications allowed. No engine in any classification may be bored or stroked except for the over-bore allowance in "B Modified" and "AA Fuel" divisions for clean-up of cylinder. TRACK LOCATION: 12910 Foothill Boulevard, San Fernando, California

EASTERN STATES CHAMPIONSHIP

The Pennel Quarter Midget Racing Club of Pennsylvania has just announced their second annual Eastern States Championship scheduled for late September. Site for the large Eastern event will be the famed Langhorne Speedway. The dustless, oil-clay surfaced 1/20th of a mile is situated on the infield of the speedway. The Langhorne Speedway is located on U.S. Route #1, between Philadelphia and Trenton, New Jersey. Racing participants will sign up between the hours of 10 A.M. and 2 P.M. on race day. Qualifying will commence promptly at 2 P.M. and will continue 'til 5 P.M. Races will start immediately after termination of qualifying. Three racing divisions will make up the national program; "Stock", "B Modified", and "Open

CAR CRAFT

Fuel". Only twenty-one cars will be selected for individual racing classifications. Top qualifiers of course, will determine each of the twenty-one cars class rosters. After qualifying the top twenty-one cars in each racing division will be thoroughly inspected by technical crew before competitive events commence. Any quarter midget east of the Mississippi is eligible to compete in this championship event. The only requirements are that the driver be experienced and is a member of a quarter midget association. Membership cards, or verification must be presented. Visiting, or out-of-town participants, will find an abundance of excellent hotel, motel lodgings available. Reservations can be made by writing the sponsoring Pennel Association. Additional information, entry blanks, and rules and regulations can be obtained by contacting Buzz Fangio of the Pennel Quarter Midget Racing Association, P.O. Box 53, ESC Department, Pennel, Pennsylvania. Please enclose ten cents to cover cost of mailing.

WESTERN DIRT TRACK CHAMPIONSHIP

Monte Vista Quarter Midget Racing Association has just announced August 29th and 30th as dates for their second annual Western Dirt Track Championship races. A pre-qualifying system is planned for the huge Southern California event, inasmuch as August 17th thru the 23rd has been set aside to qualify all entrants for the two day event. Qualifying on these seven days will commence at 6:00 P.M. and will run thru to 10:00 P.M. No particular evening is set aside for any one group or individuals, but all entrants must qualify during these specific dates to assure themselves a spot in the race day lineups. Classes for the dirt track title are as follows: "Stock" (junior 4-8 yrs. - senior 9-12 yrs.), "B Modified" (junior 4-8 yrs. - senior 9-12 yrs.), "Open Gas" (junior and senior inclusive) "Special Overage Division" for all entrants above the age of twelve and over fifteen years of age. Western rules and specifications will prevail in all racing classifications. All events are open to both sanctioned and independent racing associations. Race day activity will get under way at 9:00 A.M. August 29th and 30th. All qualifying entries will be the recipients of one 8x10 photograph, taken during qualifying, and an embroidered emblem for their participation. In addition to these special gifts, special designed trophies for the championship title meet will also be awarded class event winners. Monte Vista QMRA's 1/20th of a mile clay oval track is located on the Arrow Highway, between U.S. Highway 66 and the San Bernardino Freeway. Further information can be obtained by writing: Jim Johnson, 449 Azlea Avenue, Ontario, California. Phone YUkon 6-7459.

New 1/8th mile asphalt "Durham Raceway" features avocado-shaped track with 129 foot straightaways. Track alternates races for half midgets and go-carts.



NEW BILBROOK QUARTER

Bilbrook Manufacturing Division of West New York, New Jersey, has just released their all new "Bilbrook Quarter Midget". The new pint-size speedster possesses a 50-inch wheelbase, tread width of 30-inches, over-all length of 75-inches including nerf bumpers. Weight of the car is



170 pounds; engine, AU7R Continental. Tires up front are 10-inch, while rear measures twelve. All steel frame features adjustable front suspension system; leaf spring—"A" frame type. Rugged three-piece fiberglass body is also featured in new design. Safety features of car are robust roll bar and web-type safety seat belt. All exterior metal components, nerf bars, front suspension system, etc., are chrome plated. Priced at \$525 complete F.O.B. For further information write: Bilbrook Manufacturing Division, 322-26 55th Street, West New York, New Jersey.

NEW DURHAM RACEWAY

One of Southern California's new miniature speedways is the "Durham Raceway". The 1/8th of a mile track is truly unusual in design due to its avocado-type oval shape. The north turn is 130 feet long with a radius of 65 degrees. The south turn is 90 feet in length and is radiused at 45 degrees. Straightaways are 129 feet long. Surface is asphalt with twenty foot width in both turns and straights. Perimeter of the track is fenced featuring a buffer zone of haybales. Pit area measures some three thousand square feet and is completely concrete paved. Operating since Memorial Day, Sunday race days are alternated with both half midget and go-cart activity. Supervised practice is allowed on off-day participation, but drivers and car must meet standard safety specifications. A repair truck is on the grounds for on-the-spot repair services. One-day accident insurance can be purchased at the track. Future improvements call for the installation of lighting to facilitate night racing. Track's location is 1315 East Holt Avenue, Ontario, California. Entrance is located on adjoining Nocta Street.

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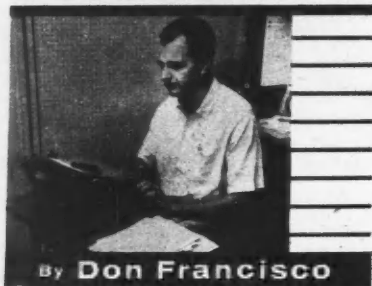
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WHAT'S YOUR PROBLEM?



By Don Francisco

POOR DESIGN

Dear Don:

My 1957 Ford V8 is giving me fits. Gasoline consumption is high and I can't get it to idle smoothly. I can turn the carburetor's idling adjustment screws all the way in until they seat and the engine continues to run.

The carburetor is a Holley four-throat of the type that has a float bowl at the rear as well as the front.

—Franco Soldero
Cicero, Illinois

Your complaint isn't uncommon from owners of cars that are fitted with Holley carburetors. For some unknown reason Holley engineers use a vacuum-actuated valve in their carburetors to richen the fuel mixture delivered by the carburetors when an engine is running under conditions of low intake manifold vacuum. This valve is called an "economizer valve" because under normal driving conditions it is closed.

The valve is opened and closed by a small fabric diaphragm. One side of the diaphragm is below the level of the fuel in the float bowl and its other side is in a chamber that is in direct communication with the intake manifold. Vacuum in the intake manifold acts on the chamber and the diaphragm.

It isn't uncommon for the diaphragm to fail by cracking or becoming defective in some other manner that allows fuel in the carburetor's bowl to pass through it and directly into the intake manifold. This upsets the air-fuel ratios delivered by the carburetor's discharge nozzles and ports and makes it impossible to adjust the carburetor so the engine will idle smoothly. The obvious repair for such a condition is to install a new valve and gasket. It isn't impossible for a new valve to be defective so don't be disappointed if you have to try a second one.

TOO MUCH OIL

Dear Don:

I have run into a problem with my Chevy V8. It is a '57 fuel injection block with a Horsepower grind roller tappet cam. The man from whom I bought the cam didn't send the tool for enlarging the valve spring seats so I had this done at one of our best machine shops. Also, no valve stem oil shields were supplied in the kit.

Now that the engine is together and running I have an oil problem. The problem isn't the result of worn valve guides because the heads are new. I wrote to the grinder of the cam to see if he could tell me what my trouble was and he said to weld shut the oil holes in the rocker arms. I did this but the valves still get too much oil. Because of the small inner valve spring used in the dual spring setup, I can't find a valve stem seal small enough to prevent oil from running down the stems and into the combustion chambers. I tried rubber caps of the type used on distributor cap sockets on the valve stems and they worked fairly well until they became oil soaked.

My car does so well on the drag strip with this new cam that I'm the talk of the town at the present time. Everyone is waiting to see if I can get the bugs out of the lubrication system and if I can there will be more roller tappet cams used here. My engine is an oil burner but it still does well until its plugs drown out.

Any advice or information you can give me on this problem will be highly appreciated.

—Gayle Field
Charleston, West Virginia

This problem isn't an uncommon one, even with flat tappet cams. It is the result of a change made originally in 1957 Chevy V8 cylinder blocks for the purpose of supplying a greater quantity of oil to the hydraulic valve lifters used in most of these engines. In 1955 and '56 the oil supply for the tappets and rocker arms was metered by a flat spot machined in the surface of the camshaft's rear bearing journal. Oil could flow from the engine's main oil distributing gallery to the galleries that feed the tappets only when this flat spot was in the position that enabled it to bridge the gap between two holes in the cylinder block's rear camshaft bearing. From the tappet galleries the oil entered the tappets through holes in their sides, flowed through the tubular pushrods to the rocker arms, and then splashed onto the valve springs and stems.

In 1957 and later engines, oil flow from the main gallery to the lifter galleries is direct and the flow of oil to the pushrods and valves is metered by the diameter of the feed holes in the tappet and the position of the hole in the tappet in relation to the supply hole in the tappet boss.

To correct your problem it will be necessary to meter the oil feed to the tappets at either its source, which is at the rear camshaft bearing, or at the tappets themselves. However, due to the construction of roller tappet assemblies, the wisest approach would be to rework the oil supply passages in the block's rear camshaft bearing bore and then grind or mill a flat area on the camshaft's rear bearing journal. Reworking the oil passages involves plugging the original passage that connects the main oil gallery with the groove around the rear camshaft bearing bore and then drilling a new passage be-

tween the gallery and the oil feed hole in the bearing insert. The best way to determine exactly how this should be done would be by examining the passages in a '55 or '56 block. The passages could then be duplicated in the '57 block.

A '55 or '56 camshaft can be used as a pattern for machining the flat in the rear bearing journal. Shafts for engines that had hydraulic tappets and longer flats than those that were equipped with solid tappets but the length of either flat is satisfactory for solid tappets. If you rework your block in this manner, be sure to reopen the oil holes in the rocker arms.

FATHEAD CARBURETION

Dear Don:

I own a 1951 Ford V8 and I am puzzled about the type of intake manifold I should install on it. Which do you think would be better, a four-throat manifold or one for two two-throat carburetors. Which do you think would be better for speed?

—Charles Dymkowski
Hillside, New Jersey

The only really practical multiple-carburetor setup for a flathead Ford that is to be used for normal driving is one that has three two-throat carburetors and progressive throttle linkage.

Four-throat carburetors are expensive, hard to work on and they can't provide the performance possible with three two-throats and progressive linkage. Two two-throat carburetors can't be used satisfactorily with the progressive linkage, making them undesirable for normal driving.

The good thing about the three-carburetor setup is that progressive linkage allows the middle carburetor to be used for all normal driving and the end carburetors can be brought into action by the driver when they are needed for maximum power or speed. Three Stromberg 97's will provide ample venturi area for maximum power and one of them will provide ample area for good low speed performance and fuel economy.

FORDILLAC

Dear Don:

Should I install a '54 Cadillac engine in a 1950 Ford four-door sedan? If I should install a heavy engine such as a Cadillac in my car, would I have to install new front coil springs too, and would I have any trouble steering the car?

What lighter engine could I use in my car without too much trouble?

—Jack Fulmer
Florence, S.C.

I'd like to have a dollar for every Cadillac that has been installed in a '49 or later Ford. The original Fordillacs that started all this engine swapping business were 1949 Fords with overhead valve Cadillac engines. These were the most successful engine swaps of all time.

Overhead valve Cadillac engines are a little heavier than flathead Fords but not enough to cause any front suspension or steering difficulties. Front coil springs for convertible Fords are stiffer than those for hard-top models and they can be installed in any Ford chassis without difficulty to help carry the load of a heavier engine if one finds that stiffer springs are needed.

Steering automatically becomes more difficult when weight is added to the front end of a car but here, again, the difference resulting from a swap of this type would be so slight that one would have to be extremely finicky to find the result disagreeable.

A lighter engine you could install in your car would be a 265 or 283 cubic inch Chevrolet but performance provided by a Chevrolet would be considerably different than that from a Cadillac. The greater displacement of a Cadillac enables it to develop greater torque at lower crankshaft speeds, which would make the car more pleasant to drive under normal conditions.

FAST BUT CLUMSY

Dear Don:

I own a '57 Stude Golden Hawk. The car is really a "flying machine" but as you probably know, its roadability is very poor.

I wonder if you could tell me what the rodders have done to improve the roadability of Golden Hawks for the drags and road racing?

—Blaine Hunsaker
Honeyville, Utah

One thing you could do to your Studebaker to improve its roadability would be to stiffen its front and rear suspension systems to eliminate body roll in turns and other undesirable movement of the frame and body in relation to the wheels. Methods of doing this are installing heavy-duty shock absorbers and stiffer chassis springs.

Heavy-duty shock absorbers and stiffer springs function in the same manner by providing more resistance than stock parts to frame movement in relation to the wheels. Heavy-duty shocks are available for most cars from several manufacturers. Springs can be made stiffer by adding leaves to the standard rear leaf springs, or they can be replaced with springs for a different model car that have a heavier load rate. Standard front coil springs can be made stiffer by the installation of rubber wedges available for this purpose between their coils, or they can be replaced with different spring wound from heavier stock. The only trouble with rubber wedges is that they will sometimes raise the height of the car in addition to stiffening the springs.

Stronger springs of both leaf and coil types can be installed without changing the car's normal height if the leaf springs have the correct arch and the coil springs are of the correct length. Stiffer coil springs will be shorter than standard springs when they are out of the car. However, if they are of the correct length they will hold the frame at its standard height because the load of the frame won't compress them as much as it compressed the standard springs.

Other things to consider where roadability is concerned is the inflation pressure of the car's tires and the width of the rims on which the tires are mounted. Factory recommended inflation pressures are much too low for good handling and should be boosted to at least 35 pounds. Rims on the wheels should be at least six inches wide for the size tires used on your car. Rims of this width would allow tires to assume a shape that gives them better lateral stability when the car is in turns.

Correcting wheel rim width can be a problem unless there is a wheel company in your

area than can fit rims of the desired width to your wheels. Sometimes wheels for a different make of car that have the correct bolt circles and offset to enable them to be used on your car can be found.

One thing you must understand about reworking your car's chassis to improve the car's roadability is that stiffer suspension springs and shock absorbers can make the car ride considerably rougher than it did with standard springs and shocks. A rougher ride doesn't bother some drivers but for others it can completely spoil a car. Fortunately, a fellow who wants roadability is usually of the type who doesn't worry about a soft ride.

JUICE PROBLEM

Dear Don:

I installed a Chevy V8 in my '51 Ford convertible but now I don't know what to do about the car's electrical system. As you know, all Chevy V8's operate on 12-volt current and '51 Fords have 6-volt systems. The Chevy ignition coil has a resistor which drops the current to about 6 volts but the starter requires 12 volts.

Upon investigation I found that some outfits sell converted starters for Chevy engines. These starters operate on 6 volts. Half of my advisors say to buy a converted starter and the other half say to go to 12 volts. If I go to 12 volts I'll have to change all the light bulbs, get new gauges, and install resistors on the 6-volt accessories in my car.

Which should I use, six or twelve volts?

—Peter Lowenstein
Scarsdale, New York

Converting your Ford to 12-volt operation would be the best solution to your problem because then you would have the advantages that 12 volts provide for starting and ignition systems.

Ignition coils used in 12-volt electrical systems are not just 6-volt coils with a resistor. The resistor drops the 12-volt current to 8 or 9 volts instead of 6. This higher primary circuit voltage enables a coil designed for it to create higher secondary voltage for the spark plugs. The result is more efficient spark plug firing at high engine speeds and when the plugs are not in top condition.

Other things you'll have to change if you use a 6-volt starter is the engine's generator and the generator's regulator. Chevy generators are, of course, 12-volt units and a 6-volt type would be required for a 6-volt electrical system.

Before you decide what to do, obtain a copy of the June, 1957, issue of CAR CRAFT and read the article concerning the 6 to 12-volt conversion problem.

NO STRAIN

Dear Don:

I plan to drop a '50 Ford V8 engine into my '50 Ford Coupe in place of the car's present six-cylinder engine. The V8 has a 37/16-inch bore, 4½-

stroke, three carburetors, Edelbrock 8 to 1 heads, and a full-race cam.

What kind of gear box and rear end would you recommend?

—Chuck Peters
Los Angeles, Calif.

The transmission and rear end assembly now in your car should be entirely adequate for the bored and stroked V8. Actually, they are identical to those used in cars that were equipped originally with V8's.

Rear axle assemblies in 1950 six-cylinder Fords had the same standard ratio as cars that had eight-cylinder engines but the fact that optional ratios were available would make it necessary to determine the car's actual ratio. This can be done by either counting the teeth on the axle assembly's ring and pinion gears and then dividing the number of pinion teeth into the number of ring gear teeth, or by rotating both rear wheels exactly one full revolution and counting the number of revolutions the assembly's pinion shaft, or the driveshaft, rotates. If the shaft rotates almost 3½ revolutions, the rear end has its standard ratio of 3.73 to 1.

The best rear axle ratio for you will depend on the use you will have for the car. A 3.73 to 1 ratio would be good for normal driving around town but a lower ratio, such as a 4.1 to 1, would allow the car to accelerate better. A higher ratio, such as 3.31 to 1, would be better for highway cruising. A ratio even lower than 4.1 to 1 would be desirable for drag racing.

KEEP IT CLEAN

Dear Don:

This is not a big technical problem but I hope you will be able to help me.

I own a 1956 Chevrolet 6 and I would like to install a paper filtering element, of the type used on most late model cars, in the air filter on my engine. Printed on the filter's body is "AC air cleaner and silencer—a replacement element is available at low cost." Does this mean that a paper element is available for this cleaner, or do I have to buy a new filter housing before I can use a paper element?

—Salvatore J. Alo
New York, N.Y.

The Fram Corporation, one of several manufacturers of paper air, oil, and gasoline filtering elements, lists an element that can be installed in your engine's standard cleaner body. However, a new cover for the cleaner is required when the paper element is installed. The Fram part number for the element is CA-140PL, and the number for the cover is KA-17. These parts should be available from most auto parts stores.

Similar conversion parts are available for the air cleaners on many makes and models of cars, making it easy to modernize the cleaners. Such conversions are extremely worthwhile because paper filtering elements are much more efficient than the oil-wetted elements or oil bath filters they replace. This efficiency adds to the life of an engine by preventing harmful air-borne impurities from entering it in the air inducted through its carburetor.



DESOTO GRILLE FOR FORD

Dear George:

I have all but finished my '53 Ford custom. The only item that remains to be completed is the grille alteration. After giving the matter some thought as to selection, I have decided upon the '54 DeSoto grille assembly. I have seen it installed in several other makes and models that have appeared in the magazine — and think that it would offer my Ford a pretty special look. Will the installation be a difficult one? Possibly you would recommend some other assembly?

— Billy Wilkins
Argo, Illinois

I think your selection is a good one, Bill. It has been done before, and is relatively easy. As with most grille installations of this type, whereby you are adopting a complete unit in an oblong cavity, your first chore will be to determine the center of the grille's opening. After you have arrived at a center point, then hold the DeSoto grille assembly in position (centered) and mark off where your vertical support brackets will have to be placed. Construct the vertical support bracket from sturdy metal. Once the brackets are built, drill the necessary holes for mounting and install the new grille. Completed appearance will be a "floating" style, with the DeSoto assembly spaced evenly in the center of the grille opening.

CANDY COLOR CONFUSION

Dear George:

I have just completed painting my '47 Chev with a candy paint. I followed directions given in the February and March '59 issues of Car Craft. I used the silver underbase mixed according to formula with Rinshed and Mason's bright iridescent and their fortifier. My problem is this: I can still see silver streaks running up and down all over the car.

I started the paint job by stripping the car completely of paint. I applied two quarts, or one complete covering, of Duco's Make-Ready. This was followed by three coats of the silver

underbase, then two quarts of Acme's Bond Tite. We then mixed our color, a purple, and applied four coats of this. It was then that we saw the silver streaks all through the paint. We applied four more coats of thicker paint mix but it didn't seem to help one bit. Is it now possible to keep adding color to cover these streaks? If not can it be done over to any degree without starting from bare metal again?

—Dean Robbin,
Minneapolis, Minn.

Your downfall with the paint job is apparently in the spraying procedure with the base, top and color coats. They are not applied evenly, therefore, as you say, you're plagued with light and dark spots and streaks. To remedy this, I'm afraid you'll have to start over again. Be sure to start with bare metal and sand the primer coat with 400 wet grit sandpaper. Then, apply your Make-Ready. I suggest you practice with the spray gun for a while to get an even flow; for the Candy colors, it has to be perfect.

PLYMOUTH ROCK

Dear George:

Just a few months back, I started customizing my '55 Plymouth coupe. I followed the usual custom route, nosing and decking, and switching a pair of '56 Lincoln taillight lenses for the stockers.

I have created a problem for myself, however, in selecting a grille. There aren't too many that would be of use in the first place, and those that I did like wouldn't fit. I have finally selected the '53 Chevy unit with extra teeth added. Will it fit, or should I quit looking and build a grille?

—Frank Gaggie
Brooklyn, N.Y.

I think the Chevy selection is a wise choice. You'll not have much trouble in installation procedures, as all you have to do is align the grille assembly with the cavity and mount it.

Though the Chev grille will look sharp in your Plymouth and will be fairly rare due to the few '55 Plymouths which are customized, you might consider a completely original grille for the car. Use tubular bars, similar to the accessory grilles on the market, or design a mesh screen set-up with the latest fad—drawer knobs and hardware—attached. Another idea is the screen with chrome bullets. Whatever your final selection in this category, you can be sure it will be an elementary grille as you'll only have to trim the screen to fit, attach with small angle brackets, and bolt-on the hardware or bullets. It's that simple.

CROWN 'VIC' CUSTOM

Dear George:

My car is a '55 Ford Crown Victoria. I want to customize it, but am not sure just exactly what to do. The

two areas which have puzzled me the most are the grille and taillights. I don't know what to do. Can you give me any suggestions?

—Al Gluth
Houston, Texas

There are several ideas you could choose. First, you could substitute the grille with an accessory unit from one of the supply houses. These are made exclusively for your model and will be easy to install. Secondly, you might adapt an accessory grille for another model car to your Victoria. Third, you could install a grille from another automobile. My suggestion for this would be either the '56 DeSoto or the '53 Chevy. Finally, you could build a special grille. Here, the field is wide open. Quickly, however, you might choose from either the mesh screen grille with bolt-on accessories—hardware or bullets; a special floating bar; or, you could construct a tubular grille of your own design. As you can see, there are a number of selections.

The same goes for the taillight problem, too. Briefly here are my ideas. Possibly one of the easiest would be the substitution of the '55 Merc station wagon taillights. Another possibility is the '57 Imperial unit or the '59 Cadillac lens assembly. The last suggestion is the plastic route: handmade of sheet or flat plastic.

I suggest you check the February '59 issue of Car Craft for the information on plastic taillights. Plastic customizing was also covered in the March, April, May, June and July '59 issues of Custom Cars, our companion magazine. You'll also find the information on 'bullet' grilles in the July issue.

LOWERING '55 CHEVY

Dear George:

I own a '55 Chevy coupe, and I want to lower it a total of seven inches. Realizing that there is a right and wrong way to do this, I would like to know the correct method. I know the ride will not be the same, but I'll sacrifice that. I just want it to be lowered and lowered properly. What do I do?

—Ray Jackson,
Los Angeles, Calif.

You're so right about the correct and incorrect lowering procedures. There is a right way to lower your Chevy that drastically and here it is. Lowering the front should be accomplished by buying a complete spindle kit from one of your local accessory houses or speed shops. If you follow the directions included with the kit, you shouldn't have too much trouble in installing the spindles. They'll lower your car, but won't change your steering geometry. Since you are lowering it seven inches (you'll not find a kit for that amount of drop) you will also have to either cut the coils a turn or two with a torch, or shrink them by heating the turns evenly. Your best bet would be to cut the coils, however, since the heating method is pretty tricky. If you want the best method of lowering the front (combined with the spindle kit) you should 'C' the arches of the frame. This is quite a job and should be handled by a competent shop if you are inexperienced with this type of work.

In the rear, you'll also be faced with a major job. First, de-arch the rear springs. This, again

can be done at home or at a spring shop. Following the procedure of the front, 'C' cut the rear frame arches also. This gives about the best ride for this amount of lowering. Finally, channel the flooring. You'll find that this combination of front and rear lowering methods will drop your car the desired amount and still retain a certain amount of riding comfort.

FOUR DOOR HARDTOP

Dear George:

I have long admired the four-door hardtops that are so popular now. I have also seen several earlier model cars which have been converted to a four-door hardtop by removing the center post. This appears to be a difficult job, but can it be done without a great amount of work? My car is a '51 Ford four-door, and I would like to change it to a hardtop.

My question is: should I attempt it, or should I forget about it?

— Bobby Chester
Long Island, N.Y.

I think the answer to the question is entirely up to you. The job is difficult, there are no two ways about it. But, it can be done at home in the same manner that has produced so many back-yard chopped tops, wielding a hack saw. However, after you have removed the center posts, you have just begun. You will be confronted with heavy top and body modifications. The frame will have to be reworked for added strength due to the loss in structural support of the top after you remove the posts. All four doors will have to be altered and trimmed at the top, while the actual tops of the doors will require cutting off and welding to the lower portion of the roof. You will have to use channel steel to form rain gutters to keep the interior free from water when it rains. You'll also have to add sturdy angle braces to the four posts for strengthening purposes. Another problem would be the construction of new window frame rails, plus added bracing for all four doors.

I hope this doesn't dim your spirits, Bob, but the modification you have in mind is quite a bit of work. If you aren't thoroughly experienced with body work, I would suggest you take your Ford to a reputable shop.

EDSEL LIGHTS FOR FORD

Dear George:

I have a set of Edsel taillights which I would like to put on my '57 Ford. I'm sure they will fit, but I do not know exactly how to go about the installation.

There are three things which worry me. They are the fitting of the unit to the fender, molding, and ex-

tending the fender to meet the tip of the lens. How do I go about this?

— Bob Thurlow
Lakeview, Oregon

The Edsel taillight is a natural for your '57 Ford, Bob. The complete story was covered in our companion magazine, Custom Cars, in the November '58 issue. There are two ideas you can use: mounting the assembly inward or outward. This refers to the direction of the fins on the light. Outward positioning requires enlarging the stock Ford attachment holes with a file. Then, add an Edsel fill-in panel to the lower light fin (or arm of the 'V' shape). You can mount this with metal screws to the fender, or you could french it. Sand and paint for finish results.

You're confronted with a little more metalwork with the second mounting idea. For inward canted fins, you trim the light housing to fit the fender and reposition the stock Ford attaching plate to correspond with the holes on the light. You will have to make a small metal frame perch to secure the inward pointed fin. This, in turn, is welded and frenched to the body. Once this is accomplished, mount the light to the fender for final adjustment. Then, remove light and dress-up the welds, prime and paint.

NEW FOR OLDS

Dear George:

For quite some time I have been contemplating a custom job on my '55 Oldsmobile. I plan to do the usual chrome removal, lowering, etc., but I am stuck for a neat grille and tail-light swap. Do you have any suggestions for something that won't require too much reworking?

My biggest problem, though, is the hood. I don't care for the hole in the center for the medallion. Is there a hood which I could switch, or can I adapt one?

— Don Miller
Detroit, Michigan

Your Oldsmobile has a fairly large grille opening, Don, so there are several grilles you could employ. I think the best installation, however, is the '56 Corvette grille. It will bolt-on, following removal of your stock grille, with a very minimum of work. You might like to add a few extra teeth to the center bar to give it a custom appearance.

For the taillight situation, I can suggest one lens assembly which is not often seen, but fits the stock housing of your Olds like a charm. The unit to which I am referring is the '57 Chrysler Imperial. This is another bolt-on-type item which really looks sharp. Replace your stock assembly with the complete light unit. That is all there is to it.

If I were you, Don, I would shy away from replacing your hood with another. There is not one which will fit it, so you will be faced with unnecessary work to adapt a different hood. All you have to do to remedy this problem is to cut a circular plug from a sheet of metal to the dimensions of the bothersome hole. Then, weld this in place to fit the hole, follow by some hammer-welding and working out to make it a smooth and neat fit. Then, apply lead and sand smooth. It is the easiest route, by far.

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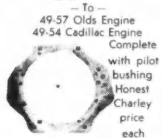
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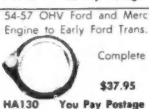


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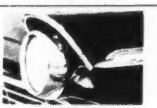


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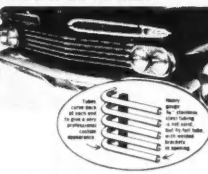
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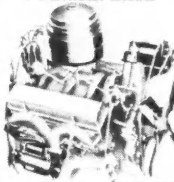
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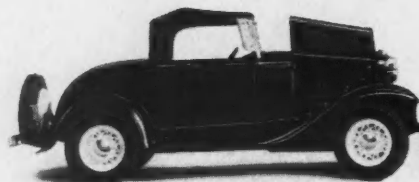
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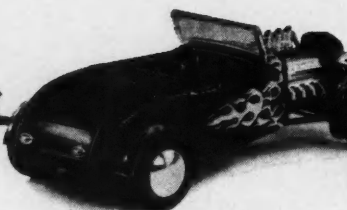
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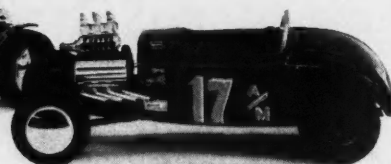
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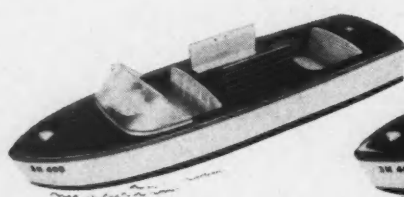
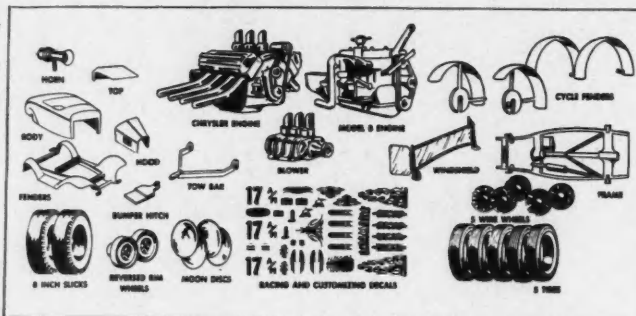


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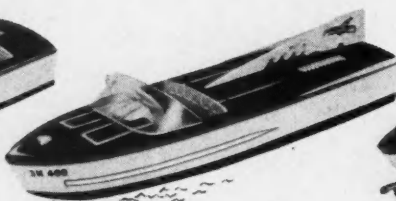
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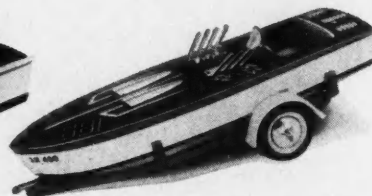
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